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April 30, 1986

Dear Service Executive,

Enclosed is our April issue of INPUT's Service Update. You'll notice that we've added the first of the Update indexes which we will be providing quarterly to help make this information more accessable to you. There are two separate cross indexes (one listing by vendor, the other by subject discussed) which cite the location of the article to reference for specific information.

We hope that the inclusion of this index will help make INPUT's Monthly Service Update a more comprehensive and available source of information. And for more in-depth information on any of the topics covered each month, phone our hotline at our Mountain View Headquarters at 415/960-3990.

Sincerely,

Kim Wertz
Kimberly Wertz
Research Analyst

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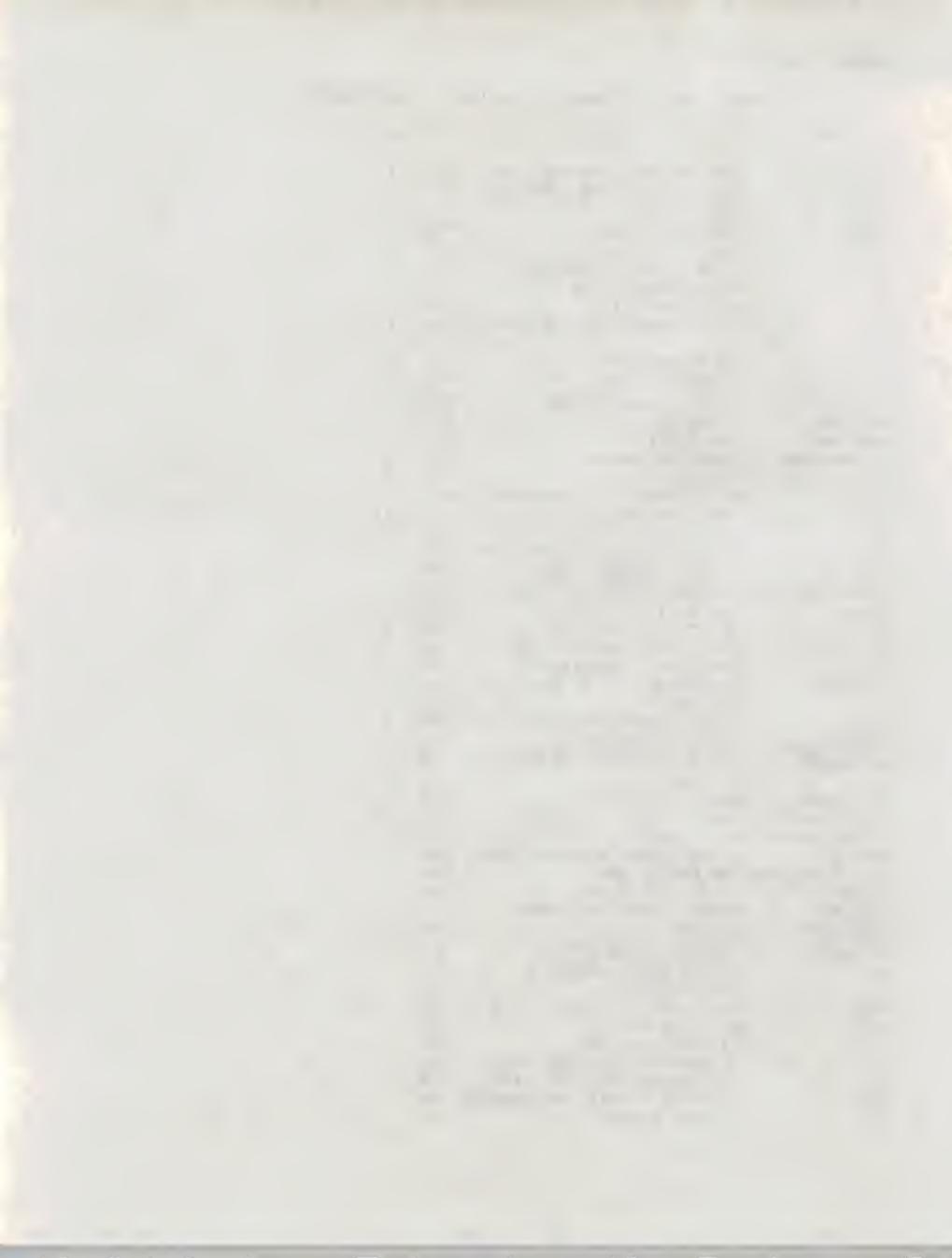
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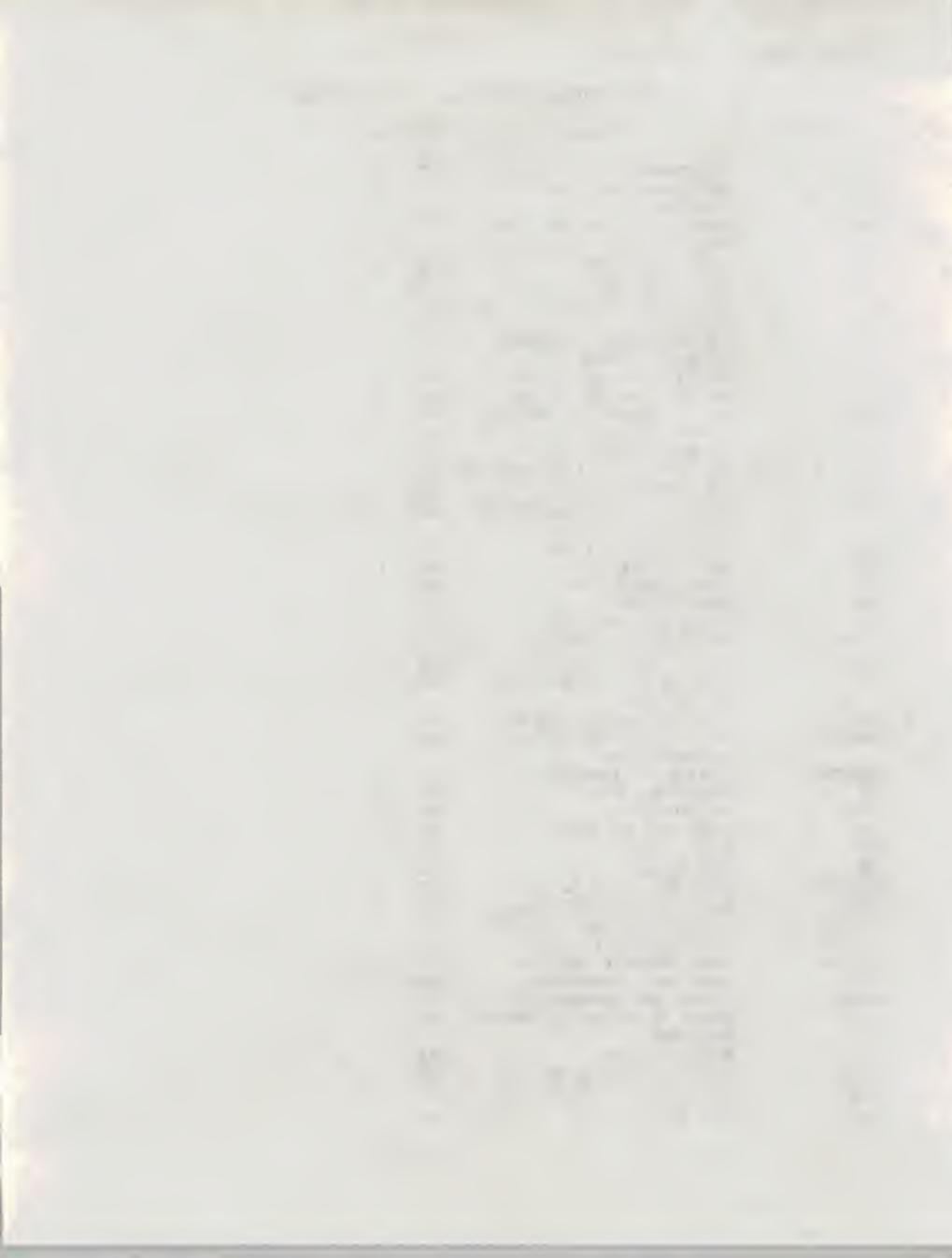
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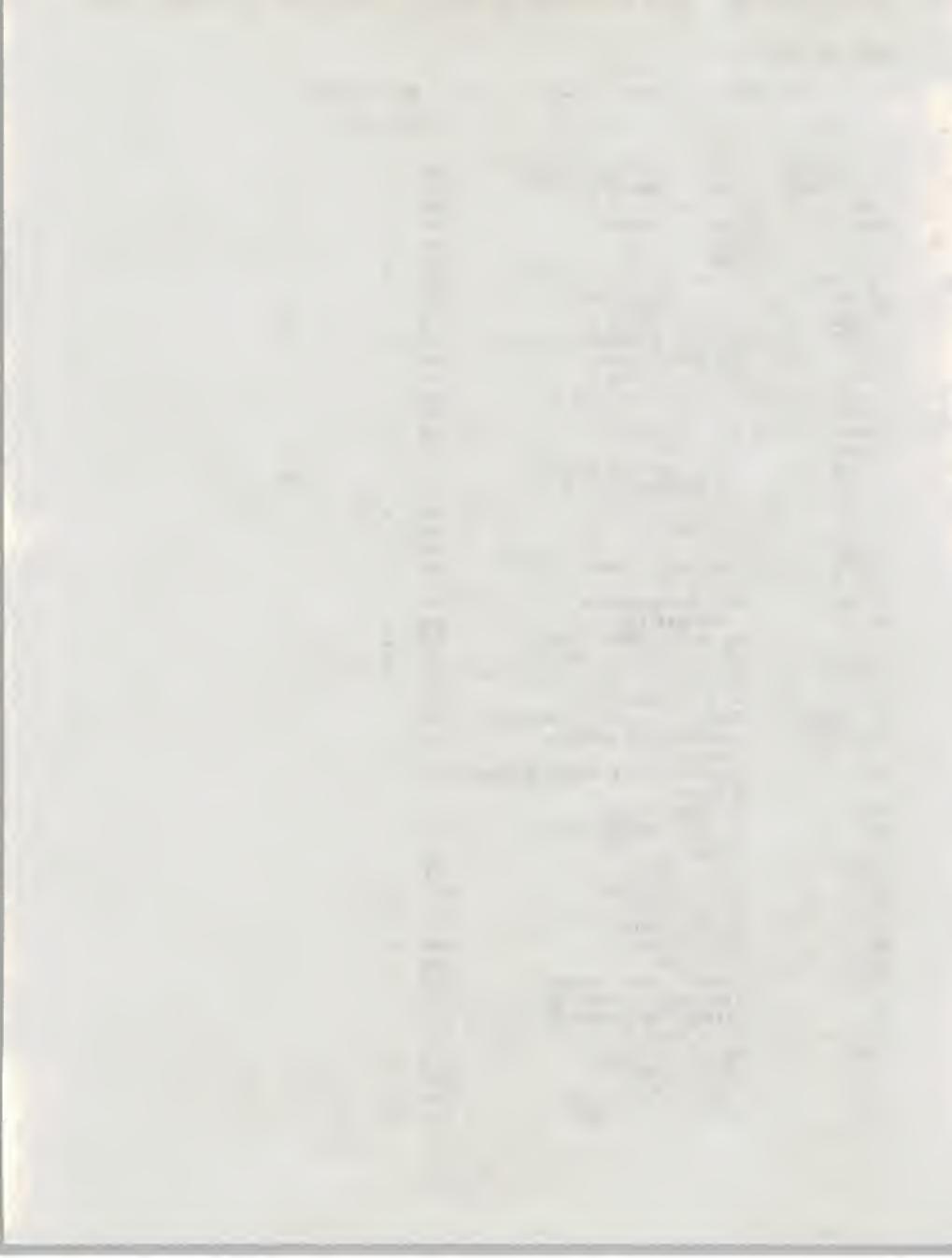
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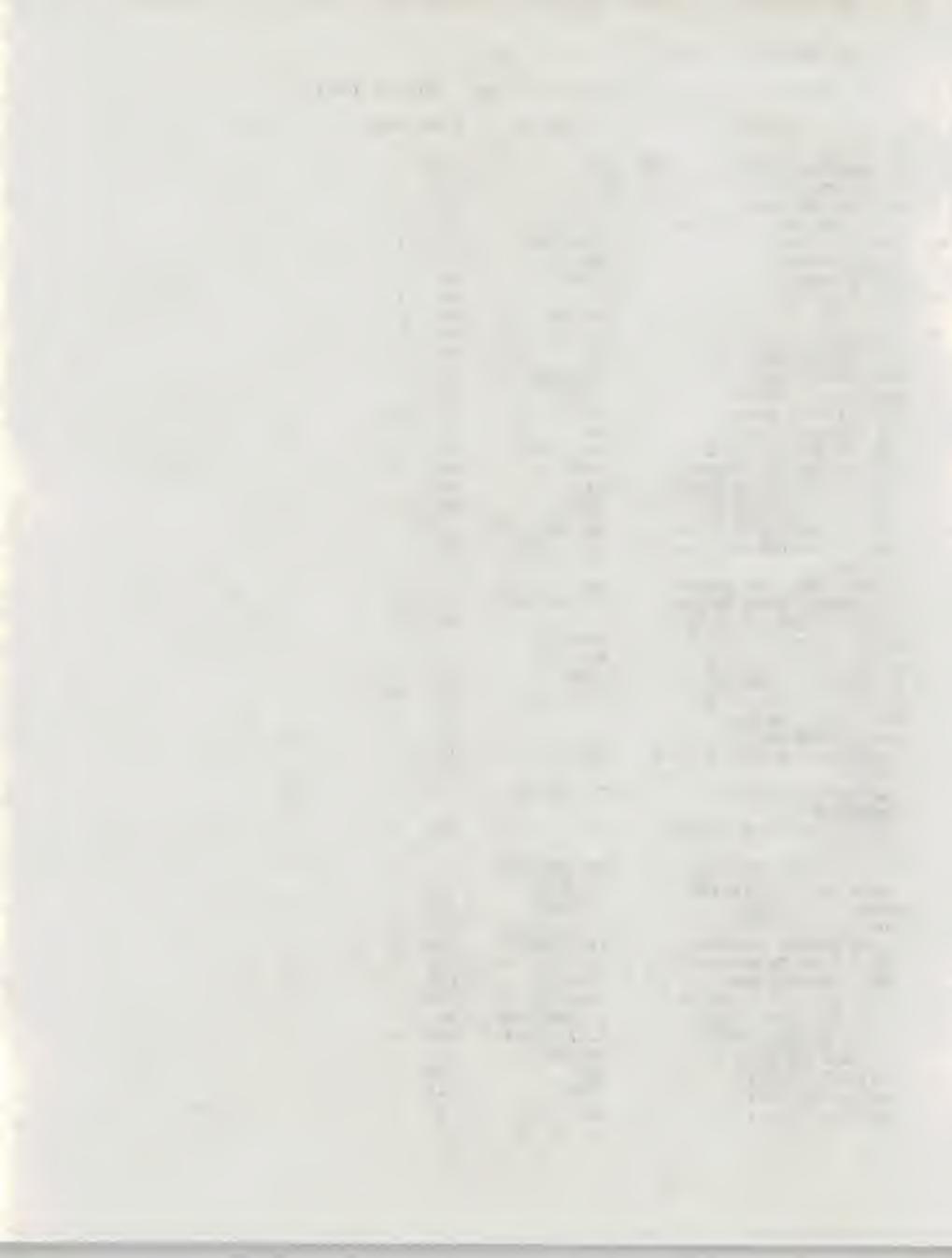


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Route:

INPUT SERVICE UPDATE

A Monthly Publication from INPUT's Customer Service Program

January, 1986

>>>GE's acquisition of RCA has aroused marked interest throughout the industry, especially in regard to any emerging service strategy. The merger unites the fourth and fifth ranked TPM vendors, together holding an 11.6 percent market share (RCA with 6.5%, GE with 5.1%) and a combined workforce of 1,276 service employees dedicated to TPM. Awaiting word on Government and shareholder approval, the merger is not expected to be finalized until the fourth quarter of this year, and service groups in each company are reporting no knowledge of future strategic plans as of yet...

>>>An inquiry regarding service on national holidays revealed some potentially cost-saving information...

>Honeywell lists Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas and New Years Days as relevant to listed holiday rates; additionally, Honeywell observes five floating holidays (varying by state) which also carry the additional holiday charges



--in total, the company has eleven days out of the year carrying the higher holiday rates.

>IBM lists five days which carry holiday charges, including Independence and Labor Days, Thanksgiving, Christmas and New Years Days. IBM has no floating holidays.

>Sorbus observes six holidays per year: Memorial, Labor, and Independence Days, Thanksgiving, Christmas and New Years. And although the Friday following Thanksgiving and three state holidays are taken by Sorbus personnel, these additional days are not considered holidays in billing clients.

>TRW observes the same six holidays as Sorbus, and staffs at half crew for the Friday following Thanksgiving and Presidents Day. Likewise, only the six nationally recognized holidays are considered for billing purposes.

>Wang lists the same six dates as billable at holiday rates, and additionally charges at the holiday rate for service provided on the Friday following Thanksgiving.

>>>Another survey across top TPM vendors regarding service contract variations highlighted some interesting differences in policy. In particular, zone adders, improved response time surcharges, and engineering change orders (ECOs) were of issue...



>>>NCR contracts service rates incorporating three zone radiiuses: Charges are at list for calls within 20 miles of an NCR service site; for technicians traveling from 21 to 40 miles to perform repairs there is a 15% surcharge; 41 to 60 miles adds an additional 25%.
(Service in Alaska is charged for by flat rate.)

>Regarding improved response to service calls through payment of surcharges, NCR can guarantee two hour response, provisions and pricing dependent upon size and type of system.

>ECOs, or "mandatory mods," are done by NCR personnel at no charge to the customer.

>>RCA carries no mileage zone adder charges.

>Response times below the four hour goal of the company are not offered for surcharge.

>ECO installation is performed as contracted with the manufacturer.

>>Sorbus uplifts standard maintenance fees by 10% within a 10 mile radius of service offices; 20% within an 11 to 20 mile radius; 30% for 21 to 40 miles; 50% for 41 to 60 miles; 75% for 61 to 75 miles; 110% for 81 to 100; and a 140% adder between 101 and 120 miles is charged. Service beyond a 121 mile radius is negotiable.

>For a 10% uplift in charges, best effort (four-hour goal) response can be improved to two hours.

>ECOs are done at no additional charge to customer.



>>Sperry's service rate structure includes no zone uplifts.

>Improvement on response time is offered only to Government contracts.

>ECOs are installed without charge to customers under maintenance contract. Non-contract customers are informed of the change, and installation is provided at purchase price if change is desired. If change is due to design error affecting the safety of operation, installation is provided free of charge regardless of contractual status.

>>TRW mileage zone adders start at a 26 to 50 mile radius with an 18.5% uplift; 51 to 75 miles carries a 37.5% increase; 76 to 100 miles, a 55.5% increase; service beyond this point is negotiable.

>Response times of less than four hours are not contracted; any faster response must be negotiated with local TRW service offices.

>ECOs are usually performed during a service call or preventive maintenance visit free of charge.

>>>A glance across the industry's top competitors' service revenue figures for '84...(Revenue figures in thousands)
>IBM's \$9,605,000 in service revenue accounts for 20.9% of total revenues (as derived from their Data Processing equipment sales plus applicable service) of \$45,937,000.



>DEC realizes 25.4% of DP sales/service revenues out of their service division--\$1,420,000 of a \$5,584,000 total.

>Hewlett-Packard's service revenues total \$530,000--or 16.1% of similarly considered total DP revenues of \$3,300,000.

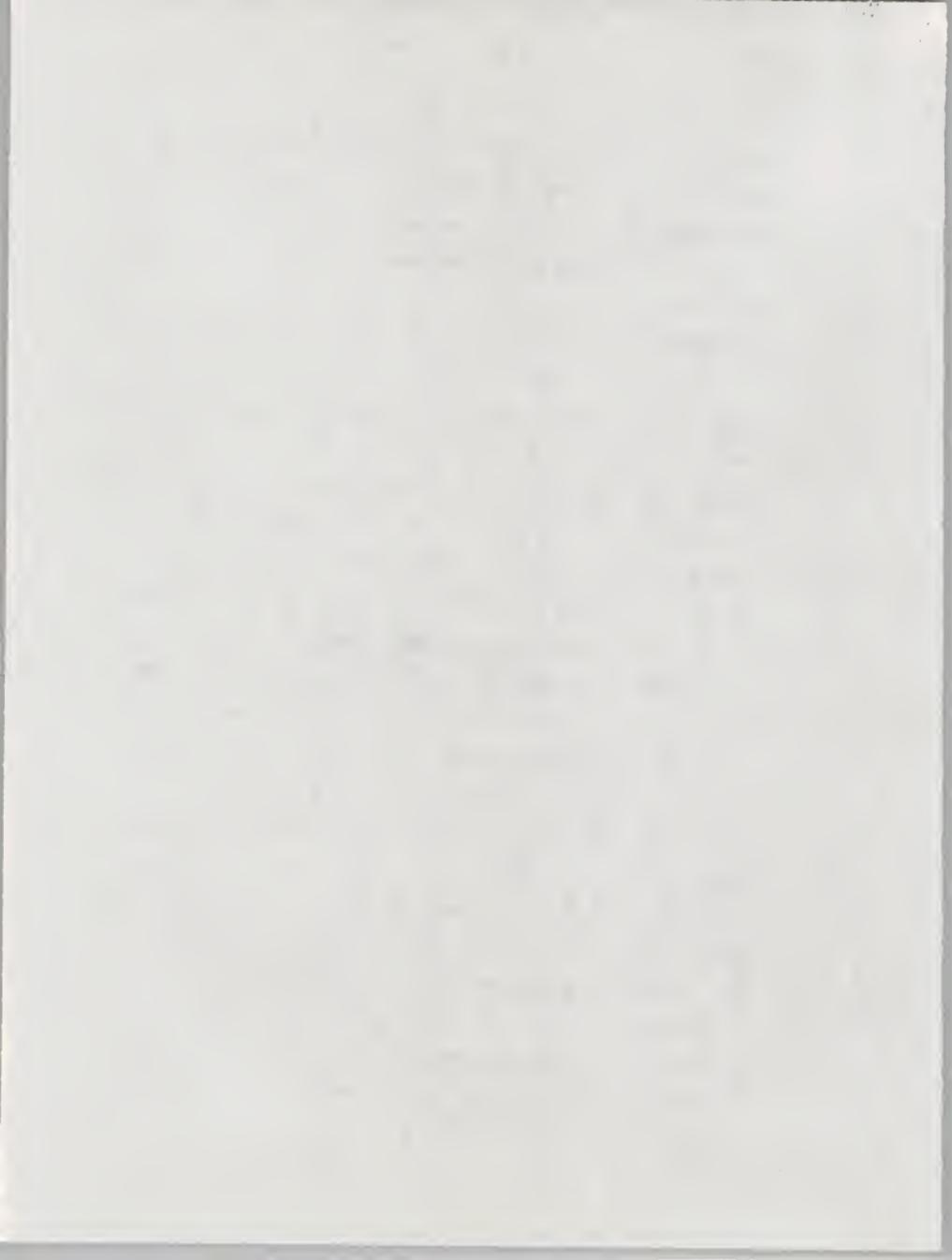
>Honeywell's service group brings in 38.1% of company DP revenue dollar total--\$696,000 of \$1,825,000.

>Data General service provides 21.6% of the \$1,161,000 total DP revenues--or \$251,000 last year.

>Prime's service total of \$164,000 comes to 26.7% of their total DP sales/service revenues of \$613,000.

>>>A recent inquiry about a Washington-based start-up venture revealed an interesting alternative for systems 34,36, and 38 users in their maintenance budgeting...

The Computer Maintenance Self Insurance Fund pools IBM system 34,36, and 38 users' standard monthly maintenance costs (as would be charged by IBM) into a common fund. If an "insured" user comes to need support, money is drawn from the pool to pay for IBM service on a per-call basis (at a time and material rate). In the meantime, the pooled funds are invested, drawing interest, and the total amount left over at the end of the period is distributed to the participating users. The only requirement of the arrangement is that the user's system have been under IBM contract within the last year and that the company agree to participate for at least six months.



>>>Here's a rundown of some of the pricing information researched by INPUT staff in the final month of 1985...

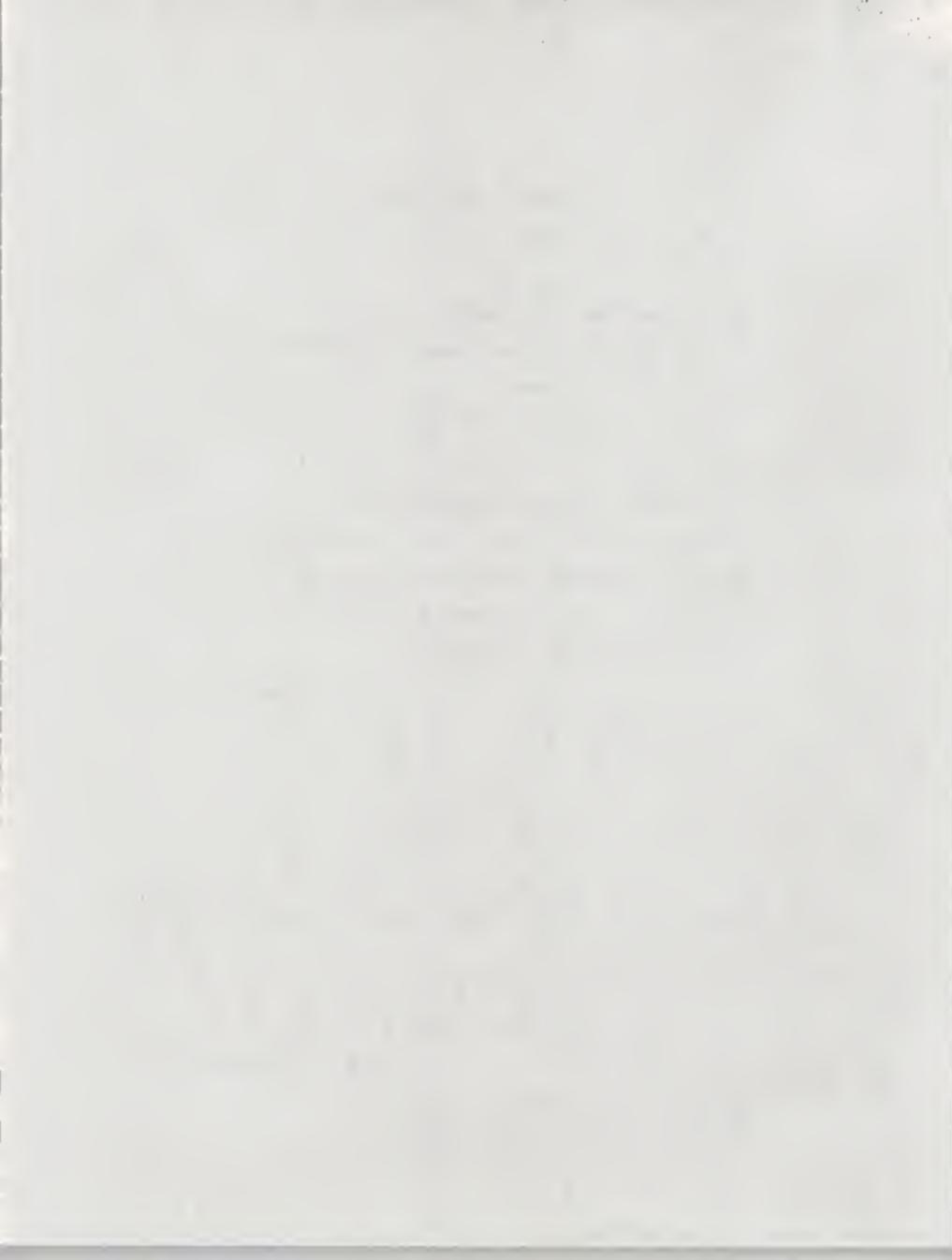
>>IBM time and material (T&M) hourly rates for servicing by their National Service Division are divided into three hardware categories: Class I, including type-writers, input processing equipment, executive copiers; Class II for media devices, copiers, workstations, displays, printers, PC's, and local or non-complex systems; and Class III rates for control units, information processing systems, local or remote sub-systems. "Prime" denotes IBM working hours Monday through Friday, 7AM to 6PM...

	<u>prime</u>	<u>non-prime</u>
>For Hardware:		
Class I --	\$88	\$101
Class II --	\$120	\$138
Class III --	\$165	\$190
>For Software:	-----	\$230

There is a one hour minimum on Class I services charged, a two hour minimum for other classes; mileage is billed at 25 cents/mile.

>>T&M rates for some of the major TPM vendors...

	<u>prime</u>	<u>non-prime</u>
> <u>GE</u> : data comm equip/PC -----	\$85	\$127.50
Prime constitutes Monday through Friday, 8AM through		



4:30PM (one-hour minimum); non-prime consists of other hours Monday through Friday (with a one-hour minimum), and all day Saturday (with a four hour minimum); Sundays and holidays are charged at \$170 per hour (four-hour minimum).

Depot service available Monday through Friday, 8AM to 4:30PM, at \$85/hour (\$50 minimum).

	<u>prime</u>	<u>non-prime</u>
> <u>RCA:</u> For contract customers- \$68	\$102	
non-contract customers- \$73	\$109	

Prime hours are 9AM to 5PM, Monday through Friday, and there is a two hour minimum charge per call; 60 cents/mile portal to portal is billable.

Depot service available 9 to 5 at \$73/hour.

<u>Sorbus:</u>	Class I -----	\$87	\$104
	(terminals/video equip)		
	Class II -----	\$102	\$122
	(minis/peripherals)		
	Class III -----	\$120	\$144
	(mainframes)		
	Class IV -----	\$79	\$95
	(micros/business systems)		
	Class V -----	\$105	\$126
	(unit record)		

Prime hours are 8AM to 5PM, Monday through Friday.
One hour minimum charge-per-call policy is not strictly
enforced: 30 cents/mile portal to portal is billable.

Depot service available 8 to 5, with a \$50 to 75 diagnostic test charge.

> <u>TRW:</u>	<u>prime</u>	<u>non-prime</u>
Office products/ -----	\$68	\$97
calculators		
all other products ----	\$94	\$133

Prime hours are Monday through Friday, 8:30AM to 5PM.

Non-prime hours are considered as 7AM to 8:30AM, 5PM thru 12 midnite, and Saturday from 8:30AM to 5PM.

All other times are charged at \$119 (office products and calculators) and \$170 (all other products).

Service rendered during prime business hours carries a minimum charge of one hour; non-prime minimum is two hours. A portal to portal travel charge of 31 cents per mile is also billable.

Depot service is available at \$68 per hour prime hours, \$94 non-prime as listed, and \$119 "other hours."

IBM Class II equipment-	\$106	\$123
IBM Class III equipment	\$154	\$177
IBM PC/327x/CRTs/-----	\$97	\$133
controllers/Series I/		
peripherals		

Prime hours for IBM users are 7AM to 6PM; mileage charges and depot service rates are the same.

>>>Of five major TPM companies surveyed, only two reportedly service the IBM Series I minicomputer,



namely TRW and Sorbus. Indeserve does offer support for the system through some of their independent service offices, but conditions and availability are dependent upon the individual site. Sperry, as their service base continues to expand, reports plans of Series I support in the near future.

>>>An inquiry regarding service of DEC equipment among TPM vendors revealed only one major company offering support -- CDC. Both TRW (who currently services only printers for DEC) and Sperry (now in the process of expanding their limited service offerings) are considering inclusion of many more DEC products for service in the coming year.

>>>A recent request for a listing of companies dealing in disk refurbishment yielded the following names...
on the East Coast:

> <u>Scopus</u> -----	Lowell, MA	(617)454-8033
> <u>Xerox</u> -----	Webster, NY	(716)422-8081
> <u>NY Repair Depot</u> -	New York, NY	(212)741-3800
> <u>Precision Methods</u>	Lorton, VA	(703)339-7050

on the West Coast:

> <u>Data/Tech Reliance</u>	Federal Way, WA	(206)952-2440
> <u>Granada Data</u> -----	Hayward, CA	(415)487-4042
> <u>Peripherals</u> -----	Costa Mesa, CA	(714)540-4925
> <u>Info Extend</u> -----	Santa Barbara, CA	(800)468-2000

in the Central US:

>Broder Enterprises Dallas, TX (214)241-3727

>Brum-kro Magnetics Elkhorn, NE (402)289-2400

>Control Data ---- Bloomington, MN (800)382-6060

>Newman Computer -- Ann Arbor, MI (313)994-3200

For more information or a more complete listing, contact
our Hotline.



Route:

INPUT SERVICE UPDATE

A Monthly Publication from INPUT's Customer Service Program

February, 1986

USER EXPECTATIONS FOR SERVICE CONTINUE TO INCREASE...

User demand for service continue to increase rapidly according to the initial results of INPUT's latest survey of mainframe customers. Interviews with AMDAHL, IBM, and NAS users indicate that expectations are increasing fastest in systems software support, parts availability, and engineer skill level. Vendor inability to satisfy ever higher demands for service is resulting in unprecedeted levels of user dissatisfaction and critcism of service vendors.

In March, INPUT will begin shipping the results of the large system user survey to customers of that module.

* * * * *

NYNEX ACQUIRES DATA GROUP...

NYNEX's development subsidiary has recently signed an agreement to acquire DATA Group corporation, a software and consulting company based in Lexington, Massachusetts. Among DATA Group's software offerings is the "Fieldwatch" package, a field service management system allowing on-line control and reporting of critical customer-service related data. The merger



was completed late last month; exact terms and conditions of the agreement were not disclosed.

* * * * *

SORBUS ACQUIRES CMLC...

SORBUS recently increased their field office tally through the acquisition of COMPUTER MAINTENANCE & LEASING COMPANY. CMLC was the thirteenth largest TPM vendor in 1985, with an estimated \$16 million in revenues. Offering support to IBM systems users in the Eastern U.S., CMLC operated as a service broker (discounting IBM support pricing by 20% or more). The merger, made official in August of '85, adds nine service sites and fifty support employees to SORBUS' staff.

* * * * *

DEC ANNOUNCES EXTENDED WARRANTY...

DEC's new one-year warranty accompanying their latest additions to the VAX family stirred great interest in the service community earlier this month. Although few specifics have been made public, it has been revealed that the program guarantees an on-site maintenance response time of two hours for all 8800 system users in the U.S.

* * * * *

IBM's NEW PROCESSOR MAINTENANCE...

IBM's recent announcement of two new processors likewise drew attention with its seemingly inconsistant maintenance charges. The powerful 6.8 MIPS dual processor (IBM model #4381-MG14) selling for \$735,000, carries a monthly maintenance charge of \$740; the uniprocessor (3.8 MIPS, model #4381-MG13),

announced concurrently, carries the slightly higher fee of \$746 per month.
Both charges were confirmed as currently applicable by IBM.

* * * * *

DATAPoint SERVICE?...

A survey of 10 of the top 20 vendors revealed that none were currently servicing any DATAPoint equipment. The list included TRW, SORBUS, CDC, RCA, GE, BELL & HOWELL, FDR, TTS (Total Technical Services), XEROX, and SPERRY.

* * * * *

ON-SITE WARRANTY FOR MODEMS...

Major variances in warranty policies were found when five of the top modem manufacturers were questioned on the subject...

NOVATION was the only company providing warranty work at the customer site for all installations for the full term of the warranty.

RACAL-MILGO offers on-site maintenance conditionally for thirty days, provided the set was installed by Racal. After this first month of service, the unit must be returned to the factory for repair for the remainder of the one-year term. On-site repair is made available to users by contract or on a time & material basis after the warranty term is concluded.

For PARADYNE customers who may select a three year, on-site maintenance agreement at the time of installation, on-site warranty work is available from day one of term. If any lesser term is opted for, on-site service is available only after the warranty has expired.

The remaining two vendors surveyed, HAYES and U.S. ROBOTICS, offered no on-site service on equipment under warranty; only factory mail-in repairs are available.

* * * * *

VOLUME SUPPORT ON PCS...

Through a recent inquiry of the volume support offerings available for PCs and peripherals, we discovered that both SORBUS and TRW offer discounts on PC service for large installations. For both companies, the terms and conditions were dependent on circumstance (ie, customer, types of machines, ect.), SORBUS basing the decision on dollar figure, TRW leaving the arrangement up to the discretion of the district manager involved.

* * * * *

THE MAINTENANCE BROKERS...

A request for a few examples of the kinds of companies which specialize in "maintenance underwriting," especially for IBM equipment, yielded information on some interesting maintenance strategies...

COMPUTER MAINTENANCE & LEASING provides IBM customers with the option to both increase the hours of coverage by about 18%, and reduce the cost of service by around 20% of IBM standard offerings. IBM personnel perform all of the actual maintenance, ranging from PMs and ECOs to replacement of problem machines, charging CMLC at IBM per-call rates; CMLC's profitability stems from their ability to spread the per-call risk over their large customer base. The corporation targets equipment of IBM users in the region east of Chicago.

TOTAL TECHNICAL SERVICES, based in North Royalton, Ohio, provides similar alternative maintenance programs for IBM equipment. Also providing an eleven hour (versus IBM nine-hour) principal period of maintenance at 15 to 30% savings, TTS services IBM mainframes, minis, and peripherals along with a host of other system and office product brand names, including CDC, TI, DECISION DATA, and MEMOREX. Providing maintenance for this array of machines through

both their own support staff, and through reselling/brokering efforts similar to those of CMLC, TTS offers alternative service to firms across the U.S.

PACIFIC COMPUTER CORPORATION has been providing comparable maintenance-brokering services centered around AMDAHL equipment since 1977. Focusing on what they call "hardware orphans" — machines whose manufacturers no longer provide service either due to the introduction of technically advanced replacements in their line, or to the exit of the company from the market altogether — PPC also offers servicing by their own field staff. Included among the machines maintained are IBM, CDC, STC, and MASTOR mainframes and peripherals.

* * * * *

IBM T&M TRENDS...

In a related question, the recent historical fluctuations in IBM time & material rates were illustrated:

year		prime	non-prime
1982	Class I	\$ 93	\$108
	Class II	115	135
	Class III	126	145
1983	Class I	101	117
	Class II	125	147
	Class III	137	158
1984	Class I	80	90
	Class II	110	127
	Class III	150	173
1985	Class I	88	101
	Class II	120	138
	Class III	165	190

The latest IBM price updates (effective as of February 21st) will reportedly show an approximate 15% uplift on these 1985 charges.

* * * * *

USER TECHS LEARN HARDWARE REPAIR...

Philosophical differences in policy seem to be splitting industry leaders on the issue of user training. Of eight top manufacturers, four provide hardware-repair training to customers as a standard offering, the remainder providing such high-level education only to users in extremely remote or unaccessible sites. These latter vendors, including XEROX, WANG, BURROUGHS, and IBM, view such technical training of customers as a direct threat to their service revenues. IBM did report custom contracting for any technical training requested by the customer, but the remaining three vendors basically restricted this instruction to techs on military and similar installations. NCR, DEC, HP and TANDEM, on the other hand, view these training courses as a source of potential profit (prices averaging around \$200 to \$250 per student per day), not as a drain on maintenance revenue. All four offer full classroom (and some self-paced course) training to user technicians with a variety of follow-up and advanced courses available. Considering not only the direct revenue gained from these training sessions, but also the possibility of repeat purchase which they encourage, vendors such as HP and NCR obviously regard the potential for profit as much more significant than any loss of service dollars.

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DISK REFURBISHMENT...

Interest in the partial list of companies providing disk refurbishment services which we included in last months newsletter, prompts this follow up -- an extention to that list...

on the East Coast:

NEWCORP PRODUCTS ----- Aston, PA (215) 485-8180
PERIPHERAL PARTS SUPPORT ---- Watertown, MA (617) 926-1661
CMG COMPUTER SERVICES ----- Chelmsford, MA (617) 256-6698

on the West Coast:

CAMEX INDUSTRIES ----- Camarillo, CA (805) 987-8628
CMG COMPUTER SERVICES ----- Chelmsford, CA (617) 256-6698
CPX INCORPORATED ----- Chatsworth, CA (818) 341-3783
DATA EXCHANGE ----- Newbury Pk, CA (805) 499-6702

in the Central U.S.:

AIR FILTRATION PRODUCTS ----- Tucson, AZ (602) 624-2272
KENT COMPUTERS ----- Houston, TX (713) 467-0077
TUCKER ELECTRONICS ----- Garland, TX (214) 348-8800

It was also brought to our attention that TEXAS INSTRUMENTS has entered this refurbishment market as a "fourth-party" vendor (ie, offering the service not to end users, but rather to existing service organizations). TI has opened their own refurb facility in Houston to other service vendors, providing inexpensive board-level repairs and automated re-manufacturing with a typical turnaround-time of five days as shipped to Houston.

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minimum charge of 2 hours, and additionally charge for travel at 25 cents per mile.

BURROUGHS' time & material rates are classified into two categories. The first includes more complex large systems at \$133 prime, and \$155 non-prime; the second general class of equipment is charged at the rate of \$101 prime and \$116 non-prime per hour. Maintenance on systems equipment carries a minimum charge of one hour, general equipment of two hours. Mileage is billable at 45 cents per mile.

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Route:

INPUT SERVICE UPDATE

A Monthly Publication from INPUT's Customer Service Program

March, 1986

MORE ON PC VOLUME SUPPORT...

Following up on last month's inquiry of the volume support offerings available for PCs, we discovered that along with SORBUS and TRW, both GE and XEROX offer discounts for larger installations. As was the case with the previously discussed companies, XEROX and GE base terms and conditions of the discount on situational factors. As a point of reference, the discount schedule provided by a major manufacturer, IBM, is as follows: For a single site with 150 to 499 PCs installed, maintenance prices are discounted by 15%; for 500 through 999 units at one site, a 20% discount applies; amounts totaling over 1000 units qualify for a 25% discount on maintenance.

* * * * *

MAINTENANCE PRICING ON THE NEW IBM PROCESSORS...

Expanding on the pricing mentioned in February's newsletter for the new IBM 4381 releases, here is a full listing of purchase price and monthly maintenance costs (MMC) for that family of processors...

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Model 4381-MG11, the low-end uni-processor among the group, has 4 memory options available: L11 = 4MB storage, purchase price \$185,000 and MMC \$450
M11 = 8MB storage, purchase price \$215,000 and MMC \$503
P11 = 16MB storage, purchase price \$275,000 and MMC \$609.

The 2 intermediate level uni-processors, models 4381-MG12 and -MG13 are priced as follows: M12 = 8MB storage, purchase price \$330,000 and MMC \$550
P12 = 16MB storage, purchase price \$390,000 and MMC \$656
Q12 = 24MB storage, purchase price \$450,000 and MMC \$762
R12 = 32MB storage, purchase price \$510,000 and MMC \$868.

(above applicable to the MG12)

For the MG13: M13 = 8MB storage, purchase price \$440,000 and MMC \$640
P13 = 16MB storage, purchase price \$500,000 and MMC \$746
Q13 = 24MB storage, purchase price \$560,000 and MMC \$852
R13 = 32MB storage, purchase price \$620,000 and MMC \$958.

The high-end dual processor, model 4381-MG14, can be purchased with the following capacities: P14 = 16MB storage, purchase price \$735,000 and MMC \$740
Q14 = 24MB storage, purchase price \$795,000 and MMC \$846
R14 = 32MB storage, purchase price \$855,000 and MMC \$952.

* * * * *

NEWLY-RELEASED LAZER PRINTER MAINTENANCE...

Both BURROUGHS and NCR recently released new desk-top lazer printers. The BURROUGHS unit, model number AP-9208, will be serviced on-site by the manufacturer for an annual fee of \$540, not including a usage charge of an additional 1.5 cents for each page over 6000 per month. Covered by warranty only for material defects, there is no free-service warranty period for the machine. The extent of warranty coverage available on the NCR 6416-0102 printer, in contrast, is fully dependent upon from whom the unit was purchased

the first time I have seen it. It is a very large tree, and has a very large trunk. The bark is rough and grey, and the leaves are green and pointed. The flowers are white and fragrant. The fruit is round and yellow, and tastes very sweet. The tree is very tall and straight, and its branches spread out wide. It is a very beautiful tree, and I am glad to have seen it.

(all coverage is for a total of 90 days). If the printer is purchased directly from NCR, the end-user receives warranty maintenance on-site. If sold through a dealer/distributor who does not provide maintenance to their customers, then NCR will service the machine for the duration of the warranty through a carry-in depot maintenance arrangement. If the dealer does provide its own maintenance coverage, then service is provided according to its own policy. In any case, however, should a customer contract for maintenance coverage with NCR at any time during the warranty period, they will also receive that type of service (i.e., on-site or depot) for the duration of the warranty period. Contracted maintenance for on-site service is \$707 annually for the unit; depot service can be purchased for half that amount--\$353 per year.

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A FOLLOW-UP ON SERIES I SERVICE...

A further probe into the issue of Series I service revealed that out of the top ten TPM vendors, only half are servicing IBM Series I machines. As reported in the January Update, TRW and SORBUS are currently providing service for the machines; of the remaining top ten companies, only CDC, FDR, and TTS (Total Technical Services) are currently offering maintenance. SPERRY continues to make plans to the same effect, but has not yet made the terms public.

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IBM PC MAINTENANCE PRICE SAMPLING...

A comparison of monthly service rates for 2 sets of TPM companies -- industry leaders TRW and SORBUS, versus the smaller contenders, DIEBOLD and BUNKER-RAMO -- revealed significant differences in maintenance costs of the IBM PC-AT. Both models 5170-068 and -099, along with the 5151 monochrome monitor, were

considered. SORBUS, with the lowest rates on both models, charged approximately \$300 annually (quoting \$25 per month) for the -068, and \$396 for the -099 (or \$33 per month). Pricing on the monitor was broken out at \$37.50 yearly. TRW's pricing ran slightly higher for the -068 and -099 units, at \$315 and \$439 per year, respectively. The annual maintenance charge on the 5151, however, was slightly less than that charged by SORBUS -- \$34. Service provided by the two smaller companies was somewhat more expensive, especially in the case of BUNKER-RAMO. BUNKER-RAMO's charges of \$475 for the AT-068 and \$750 for the -099 were considerable higher than those of DIEBOLD, at \$325 (-068) and \$442 (-099) annually. Pricing on the monitor was much more competitive, DIEBOLD charging \$41 versus BUNKER-RAMO's \$45.

* * * * *

PC PERIPHERAL PRICING...

A related cross-vendor question of maintenance rates on EPSON, OKIDATA, and IBM printers used with such PC systems showed, again, the wide discrepancies in pricing between TPM vendors -- up to \$200 difference for the same unit's maintenance. None of the three vendors in question consistently provided the lowest-priced service of these units. BUNKER-RAMO proved least expensive for service to the IBM Color Printer (5182), at \$240 annually; TRW provides service to this unit at the higher cost of \$414.85 per year, and SORBUS, for a comparable \$450 yearly (\$37.50/month). For the EPSON FX100 Dot Matrix unit, maintenance from SORBUS at \$99 yearly was the lowest of the three, with BUNKER-RAMO service running \$120, and TRW, \$140 per year. SORBUS also provided the lowest cost maintenance on the OKIDATA ML82A Dot Matrix Printer with a yearly cost of \$162 (\$13.50/month). Service from TRW is priced at nearly one-and-a-half times that at \$247; BUNKER-RAMO charges \$180 annually.

RESPONSE-TIME TERMS...

Partial explanation for major pricing differentials between competing third-party maintainers (as evidenced in the PC PERIPHERAL PRICING section above) can be found in terms of response times provided by the servicer. TRW provides a four hour response to maintenance calls as standard to their contract, as does BUNKER-RAMO. Sorbus, on the other hand, provides response within one working day.

* * * * *

COMPAQ PC MAINTENANCE PRICING...

On-site maintenance pricing on COMPAQ's Deskpro 286 was also examined last month, for both third-party and dealer-provided service. SORBUS quoted three models serviced: 286 model I at \$35 monthly; 286 model II at \$55; and 286 model II at \$70 per month. The COMPAQ dealers contacted included BUSINESSLAND and COMPUTERLAND, both having pricing listed only for the models each retailed. COMPUTERLAND based pricing on purchase price: At 10% of PP, COMPAQ 286 maintenance started at around \$60 per month. BUSINESSLAND listed only models I and II, with annual pricing at \$509 (or approximately \$42 monthly), and \$720 (or \$60 per month) respectively.

* * * * *

TERMINAL WARRANTIES...

A request for info on warranty conditions for two terminal manufacturers, WYSE and AMPEX, revealed plans by both to extend current coverage availability. Currently, WYSE Corporation provides end-users with free service for one year from date of purchase. By the end of 1986, however, they plan to have made available a two year warranty with similar conditions. AMPEX presently offers a two year warranty as standard coverage on their terminals and were quoted as currently working on an extention to that coverage.

DISASTER RECOVERY PLAN INTRODUCTION...

A California-based company selling turnkey systems based around DEC and HONEYWELL hardware has recently introduced an extensive disaster recovery plan to their clients. Offered as part of their standard maintenance coverage, INSURENET guarantees to their customers restoration of processing capabilities within roughly 48 hours of a major failure due to floods, tornadoes, "essentially anything short of operator error." In order to cover what is usually a complete loss to the CPU in such situations, INSURENET stocks back-up systems at their main plant which can be sent out to cover customers' processing needs in the interim.

* * * * *

DATAGATE DISCOUNTS HP PRICING...

DATAGATE Incorporated, headquartered in Milpitas, CA, offers HP users significant savings on their maintenance costs. With offices across the US and overseas, DATAGATE provides both field service and mail-in repair on HP equipment at a 20 to 25% discount on HP MMCs. Providing service for stand-alone systems only, DATAGATE claims to provide all preventative maintenance and repair services to those units as are currently offered by HP.

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SENTINEL COMPUTER PROFILE...

The SENTINEL Computer Corporation, a manufacturer of minicomputers, has within the past year become a VAD for IBM's PC-AT and -XT lines. Distributing worldwide through a network of independent dealers, SENTINEL markets the -XT as a multi-task, five-user system, primarily to physicians, hospitals, credit union offices, and to industrial distribution firms. The company also provides

the first time in the history of the world, the whole of the human race has been gathered together in one place, and that is the city of Rome.

The reason why this has happened is that the Romans have always been very good at building cities. They built many cities all over the world, and these cities became the centers of trade and culture. As more and more people came to live in these cities, the population grew rapidly.

One of the most famous Roman cities was called Pompeii. It was located in Italy, and it was a very important center of trade and culture. Many people from all over the world came to Pompeii to buy and sell goods, and to learn about new ideas and cultures.

Another important Roman city was called Carthage. It was located in North Africa, and it was a very important center of trade and culture. Many people from all over the world came to Carthage to buy and sell goods, and to learn about new ideas and cultures.

These two cities, Pompeii and Carthage, were very important centers of trade and culture, and they helped to spread Roman ideas and culture to other parts of the world.

As the population of the Roman Empire grew, so did the size of the cities. The cities became larger and more crowded, and this led to many problems. One problem was that there was not enough food for everyone to eat. Another problem was that there was not enough water for everyone to drink. There was also a problem with sanitation, because there was not enough money to build proper sewage systems.

Despite these problems, the Romans were able to build some very impressive structures. One of the most famous is the Colosseum in Rome, which was a large amphitheater where people could watch gladiatorial contests and other performances.

Another impressive structure is the Pantheon in Rome, which is a large circular building with a hole in the top through which light can enter. This building was used as a temple to the Roman gods.

The Romans also built many aqueducts, which were large stone structures that carried water from distant sources to the cities. These aqueducts were very important for providing water to the growing populations of the cities.

In conclusion, the growth of the Roman Empire led to the growth of many great cities, such as Pompeii and Carthage. These cities were important centers of trade and culture, and they helped to spread Roman ideas and culture to other parts of the world. However, the growth of the population also led to many problems, such as food shortages, water shortages, and sanitation issues. Despite these problems, the Romans were able to build some very impressive structures, such as the Colosseum and the Pantheon.

these markets with the IBM PC-AT as a similar nine-user system. The service department of their Cincinnati-based operation consists of 3 technicians, providing support to their systems locally. Service on all IBM units they sell and also for their remote system installations is provided by SORBUS.

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DEC T&M RATE TRENDS...

Although time & material rates currently charged by DEC aren't available at this time, here is a historical look at the course of their charges:

year	prime	non-prime
1985...for PCs, micros and terminals...	\$70.....	\$83
...for PCs, micros and terminals...	\$90.....	\$107
1984...for PCs, micros and terminals...	\$70.....	\$83
...for all other systems.....	\$90.....	\$107
1983...for PCs, micros and terminals...	\$63.....	\$76
...for all other systems.....	\$83.....	\$99
1982...for PCs, micros and terminals...	\$63.....	\$83
...for all other systems.....	\$83.....	\$99

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MORE ON T&M RATES.....AMDAHL...STC...BURROUGHS...

AMDAHL has had a recent increase in their time & expense rates (i.e., they do not include materials in the charge). Hardware maintenance has been increased from \$165 per hour to \$190 during prime hours (7AM to 6PM, M-F), and from \$190 to \$219 per hour, non-prime. AMDAHL retains their policy of a two hour minimum charge per call, with no mileage charge. STC (Storage Technology Corporation) time & material fees start at \$147 per hour during prime hours, and are upgraded to \$170 for work done after prime hours. They likewise impose a

Kim / Please handle
Randa up game - Randa
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What is this?
What is the code?
This is the
CST newsletter.
Journe
This is this.
It is "FCSU-N"



May 1986

Supermini User Service Needs Continue to go Unmet . . .

While superminicomputer vendors improved system reliability in an attempt to meet the extremely high system availability requirements of their users, user dissatisfaction with many critical service components continues to effect overall satisfaction with supermini service and support. Initial results of the 1986 superminicomputer user service requirement analyses indicate that, according to users, vendor performance in the areas of engineer skill level (for both hardware and software) and spare parts availability continue to miss the mark. The inability of supermini vendors to satisfy user needs in these areas have opened the door to third-party encroachment as the TPM market continues to target this area as a high-growth market.

INPUT will begin shipping the results of the superminicomputer user survey to clients of the Large Systems and Small Systems modules in June. Manufacturers analyzed include Concurrent Computer, Gould, DG, DEC, AT&T, Prime, IBM, Tandem, and HP.

MDS Service Becomes Momentum Technologies . . .

MOHAWK DATA SYSTEMS' Service Division recently announced their purchase from MDS/QUANTEL, manufacturer of QUANTEL business systems. Maintenance and support will be provided by MOMENTUM SERVICES, one of the four divisions under MOMENTUM TECHNOLOGIES' corporate administration (including MOMENTUM Systems, Credit Corporation, and Manufacturing groups), focusing on providing complete "single-source service for a wide variety of computer and communications equipment" and networks. Based in Parsippany, New Jersey, MOMENTUM SERVICES provides nationwide support through their 800-member service staff.



"Exclusive" Service and Warranty Agreements . . .

A recent survey of leading third-party maintenance vendors showed little standardization in the treatment of "exclusive" service arrangements with manufacturers. During the warranty period of the product, all TPMs require compensation from the manufacturer, since the end user receives support at no charge during this time. Some TPMs require that the manufacturer compensate them on an hourly charge (usually the prevailing T&M rate), or fixed price per incident basis. Other companies require that the manufacturer purchase "service contracts" up front covering support for the duration of the warranty for each product shipped. Most TPMs negotiate the type of compensation they are to receive when they first approach (or are approached by) the manufacturer, thus, no TPM utilizes one warranty-compensation technique exclusively. In the past, TPMs were required to provide financial compensation to the manufacturer for service performed after the warranty (in a sense, a "finder's fee" for new business). While this practice still continues, growth in the stature of the TPM industry has encouraged some of the larger TPMs to drop such a requirement in "exclusive" service agreements, reasoning that the TPMs' service capabilities are benefit enough for the manufacturer.

Dealer Perks for TPM Contract Sales . . .

Policy regarding compensation packages offered to dealer/distributors for sales of third-party maintenance contracts shows little consistency across top TPM vendors. Although the most common form of compensation is straight forward commission on the sale of each contract, the level of additional incentive varies widely.

DEC's "Service Sales Agent" program offers the most comprehensive package in addition to commission on first-year contracts. Sales assistance by way of assignment of a DEC account manager, available for coordination and support of the dealer's force, is provided along with tangible sales tools, including sales training and DEC service brochures.

MOMENTUM (formerly MDS) provides a variable commission based on the level of service contract sold (i.e., higher for standard service and lesser for basic or depot contracts) paid as a percent of the sales quarterly. In addition, the dealer can earn additional incentives at year end by exceeding a pre-determined sales quota.



HONEYWELL's "Service Sales Representative" program allows dealer/distributors (and eligible manufacturers) to act as a HONEYWELL TPM contract sales agent, providing comparable first-year contract commission incentives.

TRW reportedly provides no compensatory arrangements to dealers for sales of TPM contracts, but rather works in an arrangement where dealers purchase any contacts to be included in the sale directly from TRW; no commissions or compensation to the dealer are involved.

Providing Support for Major Accounts . . .

Providing support for a customer with a considerable installation, whether the machines are installed at a major single site or at installations across the country, requires special consideration. A look at contending manufacturers' policies regarding such customers revealed varied methods of handling the concessions and coordination of the accounts.

DG's "Cluster Discount" program provides large installations with scheduled discount on contract pricing, provided the machines reside at a single site. DEC provides allowance to large installations by way of a "Major Site Credit" program, basing the amount credited on the total monthly contract charge (for monthly maintenance fees totaling \$8,000-16,000, a 5% credit is allowed; \$16,500-25,000 is refunded 15%; over the \$25,000 mark, customers receive a 20% credit). To qualify for the credit program the units involved must be installed within a five-mile radius of each other and be covered on a single maintenance contract.

GOULD provides special consideration for their national customers through assignment of a "national accounts manager" who provides a single contact for the customer for any service or sales questions or problems that may arise. Any discounting provided to the customer is negotiable between the two companies.

PRIME's policy regarding such large, national accounts is similarly situational regarding cost savings--an installation with a "master contract" including all units involved can be provided with discounts negotiated by size. Similarly, an account manager is assigned to handle all service issues encountered by the customer.



IBM's Test on Volume Discounts . . .

A recent query posed to IBM regarding their policy on maintenance discounting brought up their oft-questioned "EMA" (Enterprise Maintenance Agreement). IBM reported that the EMA arrangement was a test (accounting for industry confusion over inconsistencies in the program's availability) and now has been completely withdrawn from the marketplace. Accounts involved in the original test will be served under the discounted agreement through term. The program is now going through the evaluation process and IBM reports no current offering of volume discounts beyond those scheduled and published for their PCs.

T&M Specifics . . .

Confusion over the defining parameters of time and material charges for IBM and NCR prompted a question regarding the actual billable time of a call. IBM bills their per-call customers for travel time from point of origin to the customer's site, and actual time to repair--i.e., "portal to portal." NCR's policy is not quite so clear cut--if the customer is under a maintenance contract but requires per-call service outside of their principle coverage, charges begin to accrue as the technician leaves for the site (portal to portal is billable). If the user is not covered by an NCR contract but is a per-call customer in the usual sense, then they are charged at T&M rates for only the actual time to repair. In addition to this, a travel expense is levied as a flat rate by 20-mile zone radiiuses. NCR minimizes the expense for customers by pro-rating the total travel expense between the number of customers' sites visited for maintenance on any given trip.

Government Discounting TPM . . .

Discounting maintenance pricing from public commercial rates for government contracts has been a topic of interest throughout the past month. Of the top third-party maintenance vendors, the difference in the amount of this discount granted to GSA customers runs between 3-4% on average--TRW cutting commercial rates by 6.35%; SORBUS discounting prices as low as 10% for government accounts.



IBM's "TPM" Announcement . . .

Early this month IBM announced their agreement to offer support to non-IBM personal computer products. The coverage (contractable only as an amendment to IBM on-site repair) includes only the removal/replacement of another vendor's unit causing failure of the IBM system under contract; no repair or problem diagnosis of the foreign machine will be provided. The limited number of non-IBM products which IBM has previously agreed to provide support for (e.g., certain EPSON printers) are not eligible for this support which can be amended to the IBM PC service contract for a \$30 per system unit annual charge.

UNIX Hotline Support . . .

An inquiry as to the going rates across top manufacturers for telephone support for UNIX software revealed that HP is the only contender currently offering such service. Neither IBM nor SPERRY make hotline phone support available to customers, but DG has plans to provide the support in the near future. The service provided by HP (for users of the integral PC) is available at a \$45 per call fee.

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May 1986

Supermini User Service Needs Continue to go Unmet . . .

While superminicomputer vendors improved system reliability in an attempt to meet the extremely high system availability requirements of their users, user dissatisfaction with many critical service components continues to effect overall satisfaction with supermini service and support. Initial results of the 1986 superminicomputer user service requirement analyses indicate that, according to users, vendor performance in the areas of engineer skill level (for both hardware and software) and spare parts availability continue to miss the mark. The inability of supermini vendors to satisfy user needs in these areas have opened the door to third-party encroachment as the TPM market continues to target this area as a high-growth market.

INPUT will begin shipping the results of the superminicomputer user survey to clients of the Large Systems and Small Systems modules in June. Manufacturers analyzed include Concurrent Computer, Gould, DG, DEC, AT&T, Prime, IBM, Tandem, and HP.

MDS Service Becomes Momentum Technologies . . .

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June 1986

Minicomputer User Service Market Demonstrates Marked Inconsistency . . .

Perhaps a reflection of the squeeze that traditional minicomputer products are experiencing as manufacturers are introducing powerful, low-cost mainframes at the upper end and increasingly sophisticated supermicros at the lower end of their lines, minicomputer users are reporting inconsistent service from their vendors. While certain vendors, such as Hewlett-Packard, are delivering service at levels that meet the overall requirements of their users, other vendors are not faring so well. Moreover, the range of user requirements for service in this market is expanding rapidly, making it much more difficult for service vendors to offer service at a level that satisfies the majority of their users at an acceptable cost.

INPUT will begin delivering the first analyses of traditional minicomputer products service in July.

IBM Announces Increased Service Offerings On Non-IBM Peripherals . . .

IBM now lists both carry-in depot and on-site exchange and repair prices on a select new group of PC-compatible peripherals. The support will be provided through IBM's national service fleet and network of IBM Service/Exchange Centers, and pricing is subject to discount under the IBM Volume Maintenance Agreement. Here is a partial list of products now serviceable by IBM support personnel; other brands include AST, Emulex, Amdek, DCA...

June 1986

Minicomputer User Service Market Demonstrates Marked Inconsistency . . .

Perhaps a reflection of the squeeze that traditional minicomputer products are experiencing as manufacturers are introducing powerful, low-cost mainframes at the upper end and increasingly sophisticated supermicros at the lower end of their lines, minicomputer users are reporting inconsistent service from their vendors. While certain vendors, such as Hewlett-Packard, are delivering service at levels that meet the overall requirements of their users, other vendors are not faring so well. Moreover, the range of user requirements for service in this market is expanding rapidly, making it much more difficult for service vendors to offer service at a level that satisfies the majority of their users at an acceptable cost.

INPUT will begin delivering the first analyses of traditional minicomputer products service in July.

IBM Announces Increased Service Offerings On Non-IBM Peripherals . . .

IBM now lists both carry-in depot and on-site exchange and repair prices on a select new group of PC-compatible peripherals. The support will be provided through IBM's national service fleet and network of IBM Service/Exchange Centers, and pricing is subject to discount under the IBM Volume Maintenance Agreement. Here is a partial list of products now serviceable by IBM support personnel; other brands include AST, Emulex, Amdek, DCA...



<u>VENDOR</u>	<u>PRODUCT</u>	<u>SUPPORT*</u>	<u>PRICE</u>
Hewlett-Packard	Thinkjet Printer	IOE	\$130
		CCE	\$115
Epson	FX100+ Printer	IOE	\$120
		CCE	\$105
Okidata	ML931 Printer	IOE	\$190
		CCE	\$130
Hayes	Smartmodem 1200	IOE	\$110
		CCE	\$95
Tecmar	PC Host Card	IOR	\$55
		CCR	\$50
Hercules	Color Card	IOR	\$45
		CCR	\$35

*IOR = IBM on-site repair
 CCR = Customer carry-in repair
 IOE = IBM on-site exchange
 CCE = Customer carry-in exchange

Vendor Specifics on Spare Parts Deals . . .

Policies that affect the convenience of purchasing (or, in turn, the necessity of stocking) spare parts by end users can reflect a vendor's philosophy on maintenance and where the responsibility should lie. Here is an in-depth look at some of the top mid-range manufacturers' approaches to the specifics that impact a user's ability to procure spares...

HEWLETT-PACKARD, in conjunction with their "Cooperative Support Program," is among the vendors making it relatively easy on customers to purchase spares for their units. Users participating in the Cooperative Support Program are provided, as part of that service, a spare parts catalog to consult when planning or placing orders and a toll-free hotline by which orders can be placed. The catalog is also made available to distributors, dealers, and TPM parties joining the program. All spares carry a warranty against defects in materials and workmanship for a 90-day period, and various discounts, based both on dollar volume per order and unit volume per item, are available.

Of more specific conditions of the sale, there is reportedly no minimum charge per order required--emergency expediting is available (fee dependent on circumstances), customers pay freight on the orders, and restocking charges may be levied on returned spares.



DEC has a similar program for self-maintaining customers, and likewise provides a free catalog of spares to members, including third-party maintenance companies. Orders can be placed via a toll-free number. Discounts are available under DEC's Standard Volume Agreements for orders exceeding \$1,000 list. Participating "Shared-Maintenance" customers with critical down situations are guaranteed response on the status of their order within 3 hours and delivery within 24 hours when part is in DEC stock. A \$100 fee is charged for the expediting, however, and restrictions on use (both in frequency and size of order) apply. Normal delivery times vary from 15 days up to 6 months, part specific. Warranties are provided on all spares ranging from 30 days to 1 year.

DEC provides delivery F.O.B. DEC plants, but can arrange to prepay for shipment and bill if customer prefers. There is no minimum dollar requirements on spares orders.

GOULD also publishes a spare parts catalog at no charge, but distributes it only to direct customers and field sales representatives. A toll-free number is accessible to place orders, with an average delivery time of 120 days. Discounts based on unit volume are available, up to 10% on unit price for 100-plus units purchased on an order. Emergency expediting at a 10% (or \$100, whichever is greater) fee is offered for critical situations--24-hour turnover is promised.

As most other vendors, Gould warrants spare parts for a 90-day period. A \$100 minimum restriction is placed on orders and restocking charges restrict the return of ordered parts.

DATA GENERAL had provided users with both a catalog and toll-free hotline for spares ordering up until 1983. Currently, orders are placed by calling DG's main office for assistance. No discounting is offered on spares orders, which must be of \$50 minimum amount to be filled, and the parts are under warranty for only 30 days. Policy on emergency expediting is not firm: overnight shipment will be provided if the part is in stock with reportedly no extra charge.

Average delivery time on spares orders is 30 days with DG prepaying then billing customer for the freight. Restocking charges are set at 15% of unit price for spares returned with a reorder of like parts; 30% is charged if there is no subsequent reorder.

HONEYWELL reports that they are currently restructuring their spare parts program, but currently provides no catalog to facilitate spares ordering. A toll-free number, however, is available to provide assistance in ordering, and delivery can be expected within three to four weeks if part is in stock. Delays of up to 26 weeks are possible if the parts must be special



ordered by Honeywell. All parts are under warranty against defects for 90 days.

Emergency expediting is handled on a case by case basis, minimum order amount is \$100, and shipping is pre-paid and billed to the customer. Honeywell will only levy a restocking charge if the returned part was of special purchase.

PRIME has a nebulous policy regarding the sale of spares to users. A catalog is published but is for internal use only and provides no toll-free access to the ordering of spares. Parts are warranted for 45 days and delivery time on orders runs an equal month and a half. Ordering policy requires no minimum purchase per order and emergency fulfillment is available with no specific charges associated with the overnite turnaround. No discounts are offered to spare parts purchasers.

Repair to Purchase Comparison on Boards . . .

A recent inquiry across three manufacturers' depot repair rates for a range of boards revealed the following:

	<u>List Price</u>	<u>Depot Repair Rate</u>	<u>Maintenance as Percent of Purchase</u>
CPU Board: DATA GENERAL	\$4,242	\$270/incident	6.4%
	CONCURRENT	\$700/incident	8.4%
Memory Board: DATA GENERAL	\$3,800	\$298/incident	7.8%
	CONCURRENT	\$405/incident	4.5%
Peripheral Controller Board: DATA GENERAL	\$3,660	\$239/incident	4.5%
	CONCURRENT	\$450/incident	6.5%

PRIME's rates for repair were also in question--they provide no service by carry-in or mail-in depot repair.



Hotline for Hardware Support . . .

Telephone consulting support availability has become a standard feature of many vendors' normal hardware maintenance contract coverage. But, of manufacturers surveyed--including DEC, Data General, Gould, Honeywell, and Prime-one will provide users with the service without the purchase of a full on-site service contract. Hewlett-Packard's "Technical Assistance Service" (TAS) agreement offers self-supportive users technical backup through phone-in consulting, available between 8 A.M. and 5 P.M., Monday through Friday, with coverage extention to 6 and 7 days per week, 16 to 24 hours daily; uplifts range from 10% to 40%. TAS also provides the customer with a Hardware Subscription Service with manual updates and "Service Notes" and "Computer Maintenance" newsletters notifying of changes pending and procedure revisions. On-site service calls are not a provision of the TAS agreement, but, when provided as needed on a per-call basis, TAS customers receive improved response times at standard per-call rates.

Support Offered by Modem Manufacturers . . .

Interest last month in service delivery modes of telecom vendors, especially manufacturers of modems, prompted the contact of the following companies about their support offerings:

GENERAL DATACOM provides users with repair service through both yearly contractual agreements and on a per-call basis. Service is performed by GD personnel on customer site and is contractually available eight hours, Monday through Friday, extendable up to "24/7" (24-hour/7-day) coverage.

RACAL-MILGO will also provide on-site support to users and offers a depot support option. Contract customers can choose 8/5 coverage over the year term or secure 24-hour/7-day coverage on on-site repair. Discounts for large single-site installations are available. Depot service is provided as repair or replace (at R-M's option) of the defective unit. Non-contract customers can requisition a R-M field engineer at current time-and-material rates during prime hours.



GANDALF also offers on-site and depot support via yearly maintenance contracts and will provide non-contract service at an hourly rate. On-site repair can be contracted as 8/5 or 24/7 coverage. Depot service is delivered through mail.

CTS DATACOM equipment can be serviced by depot repair at the manufacturing site or maintained at the user site through contractual coverage with CTS dealers/distributors. CTS' depot support pricing is structured on a per-incident basis.

DATAGRAM's maintenance provision policy is at this time in a state of flux as the vendor closes a TPM support deal. DATAGRAM modems are currently supported by extension of the manufacturer's warranty, providing defective units with a replacement. Customers not desiring to extend the year's warranty can receive repair of their units on a per-incident basis through Datagram.

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July 1986

Vendor Data on Over 100 TPM Companies Analyzed . . .

Collection of data--including support specifics, service revenue figures, and organizational information--for INPUT's 1986 Service Vendor Profiles-Third-Party Maintenance report has been completed, and delivery of the first profiles of the directory can be expected in early August. More than 100 companies nationwide have been interviewed for the directory with 20 industry leaders targeted for in-depth corporate and strategic discussion in the report. A number of these top 20 vendors are slated for inclusion in this first set of profiles and additional shipments can be expected by clients as the profiles are completed.

Single Source Support by Vendors . . .

Learning to accommodate the needs of clients with mixed-vendor systems, while at the same time gaining service revenues at the expense of these competing vendors, many manufacturers are formalizing what are in essence, third party support offerings to their customers. Although the willingness to maintain other vendors' equipment is the basis of such "maintenance management" arrangements, most manufacturers providing the service prefer to view it more as a "full support concept" than a marketed maintenance offering...

AT&T, in an effort to expand their range of services to major business customers, announced the provision of Integrated Service Management (ISM) to select accounts mid-year 1985. ISM is based on the single-source approach to large installations, offering select customers one point of contact for the design, administration, and maintenance of multiple vendor systems. Project implementation, technical consulting, and site operations management can be provided, and although AT&T has been quoted as . . . "not in the third-party maintenance business," ISM by definition includes maintenance, on select case-by-case basis, of customer-owned non-AT&T equipment. The offering is not strictly defined by AT&T, and its availability is a function of the individual account and customer.

DATA GENERAL's term, Maintenance Management, defines more a softening of corporate philosophy than a marketed service product. Previously having been more exclusive in support provided, DG will now offer assistance to customers who adopt non-DG units into their systems, either through



direct service on the machines, or by way of coordination of recommended support vendors' service. Taking a passive approach to any marketing of Maintenance Management, the service is provided to customers specifically requesting such support, and decisions on availability are situational, as well as dependent on volume.

CDC is a third vendor approaching field service with the single source concept in mind, but with a more defined offering marketed as a formalized support product. Single Source Service, a comprehensive hardware and network maintenance program, provides mixed-vendor site managers with one point of contact for all system component needs in both remedial and preventive maintenance. As outlined in CDC marketing literature, the offering appears to be more focused on actual physical maintenance of systems than on the consulting and administration aspects of system management, as is AT&T's ISM, for instance. But, CDC's competitive prominence in the third-party maintenance arena legitimizes their emphasis on this aspect of maintenance management, allowing them to draw upon the reputation and experience of their TPM division in this offering to CDC manufactured equipment customers as well.

Other manufacturers providing forms of single source maintenance to users include DEC, Honeywell, and NCR. IBM's recent concession to (albeit limited) third-party servicing as officially announced last month, reinforces the industry trend toward accommodation of the market demand for more flexible support from system vendors.

DEC to Supply Free Support for Memory . . .

DEC has recently announced a plan to offer on-site service at no charge for memory units added on to VAX 8600 and 8650 systems. An effort to make DEC-manufactured incremental memory products more economically attractive to system owners, the support is made available to any 8600/8650 users who have contracted with DEC for on-site service on the VAX unit.

Compensation for the Weekend FE . . .

Four manufacturers were recently surveyed as to their FE pay practices for weekend work, both scheduled and on-call. These variations on the "time-and-a-half" pay standard were found...

MEMOREX offers no differentiation from regular-hours pay to their FEs working by schedule on Saturdays and Sundays. FEs working more than the normal 40-hour week are, of course, compensated through receipt of overtime pay at time-and-a-half that of their normal rate.



DATA GENERAL reportedly does not schedule FEs for Saturday and Sunday work, but the technicians can be on-call over weekends. Time-and-a-half is paid to FEs who are called out to service on Saturdays; double-time compensates for Sunday work.

NAS utilizes shift-differentials in the compensation of their FEs. If an engineer is scheduled to work on a weekend day, s/he receives their regular hourly rate of pay plus an added amount for working that shift. Should the FE be on-call and have to go into the field over a weekend, the rate of pay increases as if s/he were performing overtime work--time-and-a-half compensation is offered for work on Saturdays and double-time is paid on Sundays and Holidays.

CDC also allows for shift-uplifts in their FE pay structure, offering a percentage salary increase for any FEs scheduled for "non-standard work weeks." If the engineer is regular Monday-through-Friday personnel, but is on-call over any weekend, the engineer is compensated through time-and-a-half for Saturday's work and at double their wage for time on Sundays.

Service on Discontinued Displays . . .

Where does a customer look for support of a unit once production of that unit has been halted? A recent inquiry as to the support policies of some of the top workstation manufacturers showed few stringent guidelines on the issue, but ample coverage of service availability as well as spares to satisfy most users...

AT&T reports a policy of a five-year span of active responsibility for their workstations, as well as equal coverage on telecomm and other computer products. Support is made available for that five years beyond the date of product withdrawal, and spare parts for the unit will remain in stock during that period.

The HARRIS Corporation has set practice relevant to the maintenance of such units only as their retained-inventory policy applies. HARRIS will keep parts for a minimum of seven years after purchase of the component; it follows that any product line discontinued would still have some spares available for a maximum of seven years within which this parts policy applied. As far as actual situations regarding the subsequent service of discontinued units, the company reports that such products have been known to be retained under HARRIS care for four or five years beyond line discontinuance.

ITT COURIER, another leader in the workstation market, practices a seven-year responsibility to discontinued product users. The company promises support availability, as well as spare parts stocking for the full seven years after the station's removal from the market.



TELEX reports no stated policy regarding either parts retention for units withdrawn from the market, or the availability of their service beyond the honoring of the term of any current maintenance contracts out on the units. Although the company offers no defined promise to retain service availability, TELEX reports a lenient attitude toward the retention of discontinued-units' parts, making continued service on the products possible , and probable, in such situations.

Warranty Terms for Leading Small Systems Defined . . .

With few exceptions among the top mini and PC manufacturers, a three-month warranty period is often assumed as the current standard offering. A closer look at four of the top manufacturers' specific terms show some variation on this theme...

DATA GENERAL is most straight forward in their warranty offerings--a 90-day period of coverage is provided to customers of all of their small systems, including the Eclipse, the Nova, and their DG desktop models. Support for the units in need of service during those initial 90 days of use is delivered on the customer's site and covers the unit configuration as purchased.

WANG's micro units, including the Professional Computer (PC) and Professional Image (PIC), are likewise covered for 90 days, but service delivery for their warranty support is through mail-in depot repair. Support within these 90 days can be upgraded through purchase of an on-site service agreement at the time of unit purchase. Wang's VS minicomputer is also warranted for a 90-day term, but service for this system is delivered on-site. Both machine types are covered for repair in the configuration as purchased.

IBM's policy is somewhat less consistent in their warranting of small system products. While the original PC and the PC-XT carry the standard 90-day customer carry-in warranty service (upgradeable to on-site service through purchase of the associated option), other IBM micros have extended warranty provisions, including the laptop unit recently released. This portable PC Convertible and the PC-AT, as well as the new expanded-memory 3270 PC, all are provided with free warranty service for a period of one year through customer carry-in service. Additionally, the new PC-RT introduced earlier this year is warranted for this year term, but with on-site service provision. The unit's warranty condition includes not only the base unit as purchased, but all optional features purchased and installed with the RT. The RT's coverage exceeds even the warranty offering on IBM's popular mini, the System 36, with its 90 days of free on-site service allowed for the CPU.



DEC offers the standard type of warranty coverage on their comparable small system PDP with an on-site service provision for a 90-day term. DEC's policy is somewhat less consistent regarding the support of their micros, the terms of the warranty provided being dependent upon type of buyer. In 1983, DEC adopted a policy upgrading support offered to the retail purchaser who, upon purchase of any PC units--including the Rainbow, DECmate II, and Professional Computer (PC)--were eligible for a full year's warranted service provided on-site. This coverage includes not only the PC unit itself, but additional options or add-ons purchased with the system. Corporate buyers continued to receive the standard 90-day warranty, but likewise received the advantage of warranty service performed on their site.

Increasing competition in this lower end of the market is dictating such increases in vendors' concerns over product differentiation, warranty support being a prime target. As more PCs hit the market, manufacturers are turning to increased service offerings to give their product the competitive edge.

Profile on Sun Microsystems . . .

The first of this month saw Sun Microsystems' Field Engineering Department emerge as a separate division of the corporation. Previously combining their sales and service organizations, the Mountain View-based manufacturer has plans to strengthen their FE force in order to provide the needed support to their increasing customer base. Sun's tech support group is currently staffed by 220 service employees working out of 35 separate locations. Each office carries limited sparing levels and the central service site in Milpitas, CA operates as the main parts depot. Also, the location of their HP3000-based dispatch system, the company plans to expand their system's utilization to accommodate a centralized parts management program, additionally.

Sun currently employs a total of 50 field engineers nationwide, with an equal number dedicated to technical support at Sun service locations. Sun's field service organization, as a newly established division within the corporation, hopes to double its FE ranks within its first year of operation as a separate entity.

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August 1986

Software Users Report Low Satisfaction with Vendor Support . . .

Initial results are being tabulated for INPUT's 1986 Software Service and Support User Requirement report and samples indicate a widespread dissatisfaction with the software support being supplied by their vendors. Common comments from actual users berate the usefulness of documentation on many of the packages under study, and claims of poor response from support personnel, whether on-site or via hotline, are prevalent among the sample responses--few vendors' overall ratings are at customer-acceptable levels.

Ten of the top application and utility software vendors' support performance will be analyzed and the first five vendor modules are to be shipped to clients early next month. This initial shipment will include DEC, Candle, NCA, MSA, and Data General software user results.

Sperry Announces Free TPM Support . . .

In a new, limited-time service offering on the market, SPERRY's TPM division is providing potential customers with special incentive to give CUSTOMCARE a try. First-time customers of SPERRY support are provided with service during the first and thirteenth months of their term free of charge. The offer is part of a national blitz by SPERRY marketing and is believed to be the first offer of its kind by a major player in third party maintenance. The relatively young TPM organization is hoping to entice a ripe group of newcomers and borderline prospects into the TPM marketplace with the promotion.



Hotline Support Now Provided for Businessland Customers . . .

Billed as the "Total Support Solution Package," Businessland Inc. is now offering toll-free telephone support to both corporate and individual clients, along with an array of newly introduced services as part of the package. Utilizing an annual contract fee structure based on a maximum number of calls covered, fees for the package range from \$150 for 10 calls yearly, up \$1,200 for corporate usages of up to 100 support calls within the term. A bi-monthly newsletter, access to an electronic bulletin board, and on-site or depot service, and training is additionally made available to subscribers of the new offering.

T&M Fee Structures and Billing Practices . . .

Many of the industry TPM vendors and manufacturing companies set hourly T&M rates at varying levels based on machine type and associated complexity of support on the unit. Select manufacturers and TPM leaders were surveyed as to their methods of per-call billing and administration of individual call reporting.

Of manufacturing vendors contacted, DATA GENERAL and WANG were found to ask no differentiated fees for hourly work; DG providing service at \$95 prime, and at \$110 during non-prime hours, with a two-hour minimum charge per call reported. Wang's T&M support is charged for at slightly higher rates of \$116 prime/\$150 non-prime, with minimum billings running between two and six hours by mileage zones.

HEWLETT-PACKARD differentiates between major system support and peripheral workstation service in their T&M structure, with rates at \$130/\$166 for systems and \$92/\$118 for workstation calls. Field personnel reports service time spent on each unit serviced during a call, recording labor by model number of the machine serviced--appropriate billing is thus assured, as time per unit serviced is calculated according to FE report.

GE utilizes similar categories in their T&M rate structure, specifying systems work at \$95, and datacomm equipment and PC repair at \$85. Non-prime and Saturday calls are charged at time-and-a-half; Sundays and Holidays at double time. Billing procedures follow similar course to those outlined for HP. Each unit's service time is written up individually by the addressing FE and billing as appropriate follows.



IBM also classifies varying levels of unit labor with three distinct classes of hourly rates in effect. Ranging from \$88/\$101 for Class I "baseline products" (including office products and lesser peripherals), up to Class III ("complex" controllers and processing systems). Minimum charges per call range from one to two hours. As far as billing and reporting procedures go, IBM releases no further information than the actual rate structure.

CDC, in their TPM support, defines three levels of T&M charges and reporting is done in the standard manner (time and unit worked on) for billing purposes. The first class recognized is that of "non-standard" equipment, or those units, usually being serviced as part of a supportable system which CDC does not as standard practice support. These types of machines' and peripherals' service is charged at \$160/185 hourly. CDC's Class II at \$132/\$152 hourly, includes larger IBM systems, as well as various PCs, are considered Class III and charged at \$90/\$110 per hour for support.

SPERRY, although reporting no set T&M fee structure (i.e., individual area managers have some leeway in the setting of appropriate fees for the situation) can be quoted as providing three levels of hourly support ranging from micro and peripheral service, through mainframe support. FEs fill out service "tags" for each call, defining time spent on machine indicated. Tags proceed through billing departments and invoices for payment distinguishes between rates as negotiated.

TPM leaders TRW and SORBUS both subscribe to more involved hourly rate structures. SORBUS provides five varying levels of billing on per-call service with categories specifying terminals and video equipment, minis, lesser mainframes and associated peripherals, complex mainframe systems, micros and small business systems, and unit-record service. Specific rates and FE reporting procedures are not currently available.

TRW provides differing rates for smaller products (office products, calculators, etc.) versus larger units and systems (\$68/\$94 through \$104/\$143, respectively) and provides a completely separate structure for T&M work on IBM manufactured products. Similar methods of FE call-reporting are utilized to simplify billing procedures in cases involving the service of differing categories of machines.



Software Consulting by Mini Manufacturers . . .

A recent inquiry as to current rates and specifics of the software consulting policies of five leading minicomputer manufacturers revealed a range of vendor attitudes toward the service and varying levels of availability of support to users.

HEWLETT-PACKARD provides software consulting services to customers at differing levels of engineering expertise and services are charged for in one-day intervals. At the lowest level of assistance, an associate software engineer comes to the user site to offer consultation at \$675 per day. An engineer specializing in the specific software problem area can be contracted at \$1,000, or at an intermediate level, a generally knowledged SE can be provided at \$825 daily. These fees incorporate travel expenses for the FE's trip to the installation and HP offers no discounting on the charges rendered.

DATA GENERAL will provide access to their SE expertise at hourly rates ranging from \$85 to \$135. Actual fee is dependent upon the project, considering time the entire task will require and the level of knowledge the work entails. In this way, there is some consideration of expertise built into the rate, but it is not accountable directly as HP's structure dictates. The SE's travel expenses (such as hotel, flight, etc.) are the responsibility of the customer and DG defines no specific discount schedule associated with the consulting service.

WANG customers may elect as an alternative to their designated software service programs to request on-site software consulting as needed through WANG's Per-Incident Assistance provisions. Hourly advice from a WANG software support analyst is provided at a \$108 per hour rate with no standard discounting available. Minimum charges per call are dependent upon customer-site distance from the SE's WANG office, and range from a 1 hour minimum for up to 25 miles of travel, through 4 hour charges when the SE travels over 75 miles.

Software consulting by GOULD is not what they consider to be an "advertised offering," i.e., the support is available when requested, but work of this kind is not sought out. The term upon which they offer software analyst support is dependent upon the length of the project slated. Hourly work done on the customer's site is billable portal to portal at \$130 with expenses and a daily per diem charged. As an alternative to consulting performed at the installation, a form of remote diagnosis and consulting can be done out of a



GOULD office for a lesser fee of \$100 hourly. These rates are billable to the nearest 1/10th of an hour with a minimum charge per call of two hours. GOULD provides customers of their Premier Service Agreement with discounts of up to 25%, and for users in need of the consulting support over longer terms, GOULD is willing to negotiate to contract out their software analyst personnel for jobs involving two or more weeks of consulting.

DEC makes software engineering personnel available to clients on hourly terms--rates and discount schedules were not disclosed. Prices for the assistance do vary according to the level of assistance the user needs, but there are no categories of expertise expressly defined within DEC's software staff.

Controlling the Use of Diagnostic Packages . . .

A question aimed at evaluating manufacturers' methods of controlling the unauthorized use of the self-diagnostic software packages available on their products revealed a range of policies among top manufacturers.

Many manufacturers simply will not make a self-diagnostic package available to users, restricting its use to their own field engineering staff, avoiding any situation conducive to the uncontrolled use by unqualified self-maintaining customers or unauthorized use by TPM companies competing for the customers service dollar. Others will make such packages available to their clients, but a manner which impedes undesirable ease of access to the diagnostic capabilities.

Methods entertained by GOULD and TANDEM provide examples of two common policies on the matter. TANDEM, in a practice just recently adopted, has begun to make such diagnostic software available on a separate-license basis as the "Tiered Maintenance Diagnostic Software" offering. Made available only to self-maintaining customers and maintaining resellers who are certified as qualified users, the diagnostic packages can be purchased without prerequisites of training or current contract coverage. To be considered qualified under the policy, the user must be proven as knowledgeable and technically adept in service of the unit, as well as being obliged to maintain sufficient sparing levels and timely and regular access to subsequent FCO releases. TANDEM feels the restrictive nature of this policy will provide enough control over unauthorized maintenance on their units to protect TANDEM's reputation for quality workmanship.



GOULD's policy, representative of the more conservative of the vendors on this issue, does not provide for the sale of this type of diagnostic software as part of a packaged product readily available to users. As standard policy, access to such programs is restricted to GOULD's FE staff. On rare occasions, however, GOULD will allow the sale of the diagnostic to customers holding a sophisticated knowledge of the machine and its software. With no packaged, prepared documentation or normal support provided with the software in such cases, the manner in which the software is supplied to these users necessitates a high technical knowledge of the unit's workings in order to make the diagnostic package at all beneficial to the user. In these cases, the GOULD customer did not have nor require a contract for GOULD-supplied support; it was their purpose as a knowledgeable user to have the software facilitate their self-maintenance on the units. The exceptional circumstances surrounding the release of GOULD diagnostics precludes any great possibility of uncontrolled use of the maintenance aid in the market.

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September 1986

System Manufacturer Service Profiles Underway . . .

INPUT's Service Vendor Profile reports for both large and small system manufacturers are readying for shipment within the next month. Top competitors in both markets are featured, including Amdahl, Burroughs, CDC, IBM, and NCR among large system vendors and Data General, DEC, Gould, Concurrent, and H-P in the small system category. Information on 10 leading companies in both marketplaces is provided within each of the reports. Each profile includes insight into specific offerings and support delivery, and provides demographic and service revenue figures, an overview of the organization's background, as well as discussion of recent news items and future service directions. Subscribers to the large and small systems modules can expect deliveries before the end of October.

The GE/RCA Merger Enters Service Ops . . .

The TPM market has kept a watchful eye on GE's Integrated Communication Services and RCA Data Services Divisions since the corporate merger of the two industry giants earlier this year. More recent information confirms that, nearly one year after the agreement was struck, the third-party service units of the two companies will actively begin to consolidate their operations. Sources report that the effects of the two divisions' networking will start to be seen in the marketplace between the Thanksgiving and Christmas holidays and integration should be functionally implemented by year end. The consolidation of the TPM divisions will provide a staff of nearly 1,000 FEs with proven expertise at both the high end (with RCA's dominantly large account systems experience) and lower end (with GE's micro and peripheral business) of the market. Further information on the merger will be released as corporate confirms details.



The IBM Three-Year Warranty and Customer Responsibility . . .

IBM's recent announcement of three-year warranty support for its 3191 display station created a buzz among competing manufacturers, most of whom hold 90-day warranted service as a standard. The provision, however, is not without some "fine print" in terms of customer-performed diagnostic legwork required by IBM. Provided with each terminal are a set of "problem-solving guides," as well as a volume on Repair Center Maintenance Information. The use of these tools, as well as error indicators and off-line tests, are to be utilized by customers to isolate a failing element within the display, easing replacement or repair procedures for IBM and reducing the amount of FE time spent at the customer site when the component is picked up for exchange.

IBM offers to provide customers with assistance in the required "Customer Problem Analysis and Resolution" procedure, but exacts a fee at hourly service rates. The annual charge for post-warranty maintenance (3191 models A10 and 20, and B10 and 20) is \$40 for continued IBM on-site exchange service or is obtainable at \$30 as customer on-site exchange.

Tracking Revision Levels on Units in the Field . . .

After a unit is installed at a customer's site, it is often not readily apparent to the attending FE just what changes may have been made to the unit over time. A recent inquiry regarding the identification and tracking methods employed by various manufacturers revealed the following:

BURROUGHS, on their older systems, provides a record manually through a customer-site log held at each installation. BURROUGHS FEs, when installing any updates or revisions to the unit, indicate the new machine status in the logbook. For smaller systems, even new units are tracked manually in such logs maintained by the customer and FE. A review process is periodically done by the local engineer to confirm with clients their current system level and inform them of new revisions released since their last installation. Newer BURROUGHS large systems have internal self-diagnostic checks which provide an automated indication of the system's current revision level along with other status information displayed.

DEC has similar systems to track its units in the field. At this time, DEC FEs keep site logs at contract customers' installations and update the records with each ECO or unit update installed. DEC manufacturing is currently, however, turning out units and boards with the rev-level physically indicated on the component. A part number will be visible to the engineer with a suffix which will indicate the level at which the unit was manufactured. More technically sophisticated methods will eventually replace these modes of identification with the further introduction of VAX Bi modules to the market. The 8XXX series VAX currently has this capability (planned for most other future model releases) which allows the machine to track and identify the revision level itself through self-diagnostic tests and information display.



DATA GENERAL also reports the availability of internal diagnostics, even for its smallest units, which will display the current revision level of the system as self-checks are run. A central customer data base is also maintained and accessible to the support staff which holds information of all customer units in the field, including their revision status. FEs can extract the needed information from this source should there be a major down problem with the actual system.

H-P FEs also use a centralized data base to discern installed systems' revision levels. The data base is updated as each modification is made to the system and current information regarding the unit's status and past history can be accessed from the field.

PRIME utilizes a similar, dial-up system to track specific site information and logs all changes to units in the field in a centralized data base accessible through local field offices.

GOULD currently has such a data base system in the works and the system should be in use in the near future. Centralized in its support headquarters in Fort Lauderdale, the data base will allow engineers to access a variety of information regarding individual customers' installation histories. Units in the field at this time are tracked by standard manual site log methods.

Support on Zenith Equipment . . .

The major agent who often comes to mind when speaking of ZENITH equipment support is the third-party maintainer HONEYWELL. But, through research done for a recent inquiry, a lengthy list of additional independents offering maintenance on ZENITH machines was revealed:

The only other major player found to be supporting ZENITH systems is NCR's TPM unit, providing service on PCs as well as disks and memory expansion units. A number of smaller companies supply ZENITH users with support--among them are ABL Data Systems of Michigan; Cirvis in Southern California; Sertec Corporation located in Texas; Digital Communication Services on the East Coast; Rex Incorporated supporting users in the Midwest; and Data Access covers ZENITH customers nationally. Additionally, many smaller firms offer strictly depot support service to ZENITH units, including Computer Repair Tech, General Diagnostics Corporation, Computer Systems Service, and Servitec which offers mail-in maintenance across the country.



Source Code Listings and Availability . . .

Policies of major small systems vendors were investigated this month regarding the availability to customers of full source code listings for their products' operating systems software...

DEC, when asked about source code availability, implied that very few customers have voiced such a requirement, and of those who do, the listing is generally needed only for documentation purposes, especially among government users. For this need, DEC can provide a record of the code on microfiche for a relatively nominal fee. Sale of actual source license in tape form runs in the \$20,000-25,000 range and updates to the code are provided as changes in the form of major revisions are released on the system.

GOULD allows customers to license actual source code listings for certain classes of products running under its version of UNIX. Prices are relevant to the hardware unit involved and release of the listing proceeds via a sublicensing agreement for GOULD-supplied third-party software products.

PRIME also makes operable source code available to its users at the time of system purchase and offers options to license the listing later in the life of the product. If the initial purchase includes the software listing, any updates are provided automatically without additional fee. Should the user license the source code at a later date, a subscription service can be purchased to provide updates and revisions to the listing.

Among other manufacturers surveyed who hold a policy of non-release of operating system software source code listings are DATA GENERAL, HEWLETT-PACKARD, and WANG.

The Growing Network of Dynelectron . . .

Since the 1984 purchase of the Computer Repair Sales Company's TPM operations by DYNELECTRON corporate, the \$640 million service conglomerate has been aggressively pursuing ground in the third-party maintenance arena. DYNELECTRON's TPM division, dubbed the DYNELECTRON Service Network (DSN), is centered around the operations of the three companies acquired thus far in their surge into the TPM market--those of UNITRACE Incorporated of Santa Clara (CA), the THREE DELTA Corporation of Sunnyvale (CA), and GRANADA DATA SYSTEMS based in nearby Hayward. Each location retains its previous corporate tag as the title of its respective division under DSN, but operationally, the network is working toward consolidating the Bay Area locations to allow functioning as a single service force, sales group, and financial reporting unit. Currently employing over 200 support personnel in its depot repair operations, DSN, with the strong financial backing of the DYNELECTRON parent company, remains in an aggressive acquisition mode, and looks to merge other depot facilities and established client bases into its



operation. Targeted areas for expansion of the network include Boston, Atlanta, Chicago, and Dallas, as well as further expansion within California. John Lange, current DSN marketing vice president and former GRANADA CEO, will be stepping into the DSN presidential position this year, heading a team of executives drawn from each of the three key companies.

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FCSU
Oct. master

October 1986

Third-Party User Requirements Analyzed . . .

Part of the 1986 third-party maintenance module, INPUT's User Service Requirements--TPM report is in final draft and will be ready for shipment to clients early next month. One hundred fifty (150) users were contacted in the course of the research, and a variety of support delivery aspects and future third-party concerns were discussed with users of large and small systems, PCs, and peripheral equipment.

Separate analyses by product group are presented covering specific service offerings and vendor performance ratings. Research results are analyzed regarding the effect on the market as well as their practical meaning to support vendors.

GENICOM to Acquire MOMENTUM Support and CENTRONICS Manufacturing . . .

In an aggressive strike which took the industry by surprise, the newly-formed service organization of MOMENTUM TECHNOLOGIES and the established manufacturing business of CENTRONICS DATA Corporation were announced to be in the process of acquisition by peripherals vendor GENICOM, INC. MOMENTUM, operating as an independent unit for less than a year since their evolution from the MOHAWK DATA SYSTEMS Corporation, will serve as GENICOM's support arm, replacing the service organization of GE as a maintenance vendor of GENICOM printer and controller products. CENTRONICS, a well known manufacturer of data printers and related devices, will healthily augment the manufacturing operation of the smaller GENICOM organization.



GENICOM, INC., originally the strategic business unit of General Electric Corporation, spun-off in 1983 to form an independent manufacturing unit. Since that time, the organization has reportedly been searching for a means to provide its customers with direct support. Since the company went public in June of this year, the time is right for such a move. Details of the agreement are currently under discussion between the boards of the respective firms, but agreement in principle has been reached and conditions of the purchases will be publicly announced within the month. (As a side note, a few weeks previous to the news of the GENICOM takeover, MOMENTUM corporate president, Michael Bergamo, was relieved of his post, reportedly due to internal disputes with upper management which could not be resolved.)

Final Form of GE/RCA TPM Merger Announced . . .

The effect on the service operations of the two industry giants, GE and RCA, who merged as a corporation earlier this year, is finally visible as the Business Communication Services Organization emerges from their corporate reorganizational effort. The third-party maintenance operations of each of the companies, both among the top-ranking TPM firms in the market, will be under the direction of the new group, which is one of the few subsidiary operations to be melded operationally. The merger unites RCA's Business Communication Services and Systems with GE's Integrated Communication Services units, and will be headed by Eugene F. Murphy. The combined forces of the two major contenders will provide a serious competitive shift in the TPM market, yielding a support operation with a combined revenue base of over \$160 million.

DEC Extends its One-Year Warranty in U.K. . . .

Our London office recently informed us of an announcement by DEC of the extension of the one-year warranty which came into effect earlier this year in the U.S. DEC users in the U.K. will now enjoy this extended warranty offer not only on their high-end VAX systems (as is provided in the U.S.), but on all DEC hardware components, including peripheral units. A spokesperson for DIGITAL has informed INPUT that there are some peripherals which qualify for this extended warranty in the U.S. (e.g., the new "Print Server 40" terminal server/printer unit) and, although hesitant to comment further in terms of specifics, talked of the warranty offering as a "definite trend which DEC plans to perpetuate."



Small Systems Trade-ins . . .

With the constant announcement of advancements and upgrades to the array of small systems on the market today, users of these mini- and super-minicomputers often find their system being rapidly outperformed by newer models of their units on release. Coupled with the ever increasing demands users of these small systems tend to place on their systems, many users quickly come to appreciate the attractiveness of a replacement investment. A number of small systems vendors were asked about their policy regarding trade-in allowances toward the purchase of an upgraded system.

Users of GOULD systems have reportedly been allowed such credits toward the purchase of a newer model in the past, but GOULD currently offers no standard, advertised offering for the trade-in of older units. The extent of the credit offering is dependent upon the specific units involved, as well as situational factors.

HEWLETT-PACKARD holds much the same policy toward trade-in units, not offering any standard program crediting H-P users for replaced machines, but has been known to accept trade-ins, at H-P's discretion.

DEC's policy regarding such credits fluctuates somewhat with the individual product groups responsible for offers made to their respective customers. Trade-in programs offered by DEC are usually provided over a relatively short period of time (typically one quarter), the conditions and duration dependent on the open business opportunity which spurred the offer. The last allowance provided applied to users of the older DEC System 10 and 20, and offered credit toward the purchase of a newer VAX model.

DATA GENERAL does not at this time offer trade-in credit to customers on a regular basis, but reportedly has such a project in the works.



PRIME was the only small systems manufacturer contacted who offered such trade-ins on an ongoing basis through their extensive Upgrade/Trade-in Credit program. Allowances toward the purchase of replacements of both CPUs and memory units are provided according to an established schedule. The portion of this scheduled amount which can be applied to the replacement purchase is dependent upon the age of the system, with 100% allowable for installations under one year old, down to 25% for systems which have been in operation from three to four years. The credit amounts provide considerable savings to the users, with systems allowances running between \$10,000 (for returned 2350 CPUs) and \$161,000 (for a replaced PRIME 850).

More on T&M Specifics . . .

A recent inquiry regarding the per-call rates of some of the major large systems manufacturers revealed some significant differences in per-call billing policies. Most manufacturers, when quoting per-call rates, are referring to what is known in the industry as a "T&M," or a time and materials hourly charge, which includes both the labor performed within the period as well as any necessary parts replaced. Not so with at least two of the top competitors, namely IBM and AMDAHL, who quote "Hourly Service Rates," and "Time and Expense" figures (respectively). These hourly amounts cover labor time spent during the call, but exclude any materials expended in the course of the repair. The difference in total support cost per call, considering these differences in billing structure, can be significant. IBM's current Hourly Service Rates run between \$100 and \$219 for hardware. AMDAHL charges from \$190 to \$219 for "T&E" calls.

Discounts on Maintenance . . .

Manufacturers' discounting policies vary greatly, even among the more standard accepted volume/single-site and prepayment allowances. Following are some examples of the types of contract maintenance discounting available to users currently...

DEC offers a single discount provision for its hardware customers in the form of an annual prepayment reduction totaling 5% of the entire service charge. (Software users are granted somewhat more lenient allowances for multiple system contracts, which range from 6-15% for each of 5 to 20 systems on a single contract agreement.)



DATA GENERAL provides volume discounts for installations of 10 or more units, offering users a discount amounting to 10% of their basic cost. Annual prepayment allowances are also offered at 5%, and new multiyear discounts, for users willing to commit to longer term contracts, are currently under development. For example, customers signing maintenance agreements covering a three-year term will be eligible for discounts in the 7% range; longer commitments of five years will warrant around a 10% reduction.

These multiyear plans follow the policy of WANG with their three- and five-year price breaks, as well as prepayment allowances of 6% for expedient payment of a yearly contract fee (within 30 days of the start of term). Volume location discounts are also offered to customer sites with annual support expenditures over \$100,000; percentages vary with equipment and dollar volume.

H-P provides a similar interpretation of this volume discount, in their Major Site Service Credit program. Users are offered a credit percentage based on the total maintenance dollar amount spent with H-P for a customer's installations located within a five-mile radius. In order to apply, all equipment must be maintained under a single contract, and can qualify for discounts ranging from 5-20% for installation(s) with over \$8,333 of monthly support costs.

GOULD provides users with simple single-site discounting for both Systems Support and Comprehensive Hardware maintenance. These allowances range from 20% of monthly fees over \$4,000 to 40% of monthly fees exceeding \$8,000--a significant savings for large volume users.

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FCSU
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November 1986

Burroughs/Sperry Emerges as UNISYS . . .

In May 1986, Burroughs and Sperry culminated a \$4.8 billion merger begun almost a year earlier. While the merger created a large competitor to IBM, there was much industry speculation about how successful Burroughs and Sperry management would be in combining the two companies. Early in November, the combined corporation moved to demonstrate their determination to successfully form a single company by renaming themselves UNISYS, a name reflecting "united, information, and systems." UNISYS was heavily promoted in a \$20 million advertising program that will also emphasize the motto, "the power of two." While there is still no word on changes in service directions, early indications are that some level of employee reduction is expected to eliminate redundancy within the new corporation.

IBM Announces Maintenance Discount Amendment . . .

On the heels of the EMA (Enterprise Maintenance Agreement) select market test, a new maintenance discount policy was announced by IBM early last month in the form of the CSA (Corporate Service Amendment). Allowing corporate users of IBM equipment deemed eligible (at IBM's discretion) 20-30% discounts on total maintenance fees, the agreement is not felt to be much of a threat to existing third-party servicers, traditionally offering support at equivalent discount levels: IBM's amendment provides the lower costs only to users assessed as "following acceptable system management procedures," which includes the completion of a number of preliminary service steps, such as problem analysis, error recovery, and correction of operational problems as defined procedurally by IBM, as well as the correct identification and logging of system failures, all performed by the customer's control center.



Eligibility for the agreement is based upon the passing of IBM inspections, costing the user between \$3,500 (each systems on-site inspection) and up to \$8,500 (each network on-site inspection). Users can apply for one- to three-year CSA agreements with extent of pre-maintenance procedures necessarily performed at the site, as well as the amount of discount, varying with the specific user case. For further details of the amendment, individual users have been advised by IBM to contact their account representative.

PacTel Centralizes Support . . .

PacTel InfoSystems has recently centralized maintenance and repair operations into a single facility in San Ramon, CA. Consolidating the regionalized organization previously utilized by PacTel in support of their communications and computer products, users across the states now access a single 800-line to request service on any related equipment. Customer records have been automated, allowing operators at the service center's switchboard to field calls and process requests more efficiently using the centralized data base and a direct paging system to call engineers in the field into action. Software support is handled via a separate toll-free line and users of large datacom systems are still provided access to the remote diagnostic and repair service link through its San Leandro Center.

CDC Introduces High End VAX Support . . .

CDC will now offer service on DEC 8600 and 8650 systems, complementing their existing TPM support of related DEC peripherals. Announced in mid-November, the offering on the new high-end VAX is among the first from the third-party DEC market.

Sperry Announces Service on Microvax . . .

In another recent announcement of TPM expansion in the DEC line, SPERRY (now part of UNISYS) announced their offering on the Microvax II. Previously supporting only the PDP line of DEC systems, the new offering complements their support offered on a variety of DEC peripherals already serviced.



NCR Offers New Depot Services . . .

Based in their Peachtree, GA facility, NCR has recently announced depot level support on a variety of NCR and third-party peripherals and assemblies. In addition to testing and repair services, refurbishment and upgrading support will also be provided via carry- and mail-in centers throughout the U.S.

Mileage Surcharges . . .

A recent inquiry regarding the uplifts factored into service price for some of the top hardware manufacturers revealed some distinct differences in policy...

IBM, although having differentiated charges by predesignated zones in the past, do not specify such uplifts in the most recent editions of their standard maintenance contracts.

GOULD and WANG both structure uplifts differently for micro units versus higher performance systems. WANG, expressing a preference away from supporting remote micros and peripherals, uplifts associated contract pricing on such units by 50% when located between 50 and 100 miles from a WANG service site, and 100% for units over 100 miles from a service location. Higher-end systems must add lesser surcharges, which range from 25% (within a 101 to 200 mile radius), 35% (201 to 300 miles), up to 45% for units installed over 300 miles from a WANG site.

GOULD, on its micropoducts, specifies 25% uplifts when installed 50 to 100 miles from the nearest service location and 50% when over 100 miles distant. For higher performance systems and peripherals, lesser adders of 10% (51-100) and 20% (100+ miles) are charged. Beyond a 100-mile radius, terms are negotiable.

DEC adds a mileage surcharge to all basic service contracts and to DECservice agreements totaling under \$300. Uplifts of 10% between 100 and 200 miles, and 15% over 201 miles apply.

H-P has slightly higher uplifts in effect, at 25% (101 to 200 mile radius), and 50% (201 to 300 miles) with sites more than 300 miles remote negotiated.



Software License Transfers . . .

A recent announcement by DEC has spurred interest in the area of software license transferability among manufacturers. Previously, DEC had allowed transfer of license between parties, incurring a fee for the transfer service. A new policy was revealed at this year's DECUS seminar, however, which precluded any transfer activities between users of any of DEC's software packages. Other manufacturers surveyed held a wide range of policy toward such activities.

WANG, for instance, will allow for license transfers for usage between separate machines, but does not allow for transfer between individual owners. This applies to applications packages and carries a \$200 per software model number fee.

PRIME grants non-transferable licenses for all of its software other than proprietary operating system PRIMOS, which for practical purposes in purchase and support, is considered part of the hardware system package.

H-P, although considered an issue on the product-division level, does not have current policy allowing for any transfer activities. DG, on the other hand, reports that license transfers are allowed and can be implemented at no charge to either party.

User Training on High-End Laser Printers . . .

In a product comparison survey conducted last month, the training and discounting of maintenance for three high-end laser printers was researched. Between the three vendors considered, the policies affecting self-maintainability of the printers varied widely...

XEROX, with a wide assortment of educational programs aimed at user support staff, will provide customer maintenance training through lecture and "hands-on" applications at their Leesburg (VA) training center, or on the West Coast at their El Segundo branch. Although the courses offer detailed instruction in diagnostic and common problem repair as well as preventive maintenance, there are no discounts associated with completion of the course.



Uptime guarantees are associated with contractual coverage, offering 95% uptime on the 9700 and 8700 laser printers, and, although not yet officially announced, will also apply to service guarantees on the newer 4050 and 4060 models. Response, in order to live up to these availability guarantees, is within two hours in 70% of calls and always occurs within four hours, according to XEROX sources.

Full user maintenance training for HP 2680 and 2689 units is not available, but a mentored self-paced training course is available at H-P sites. H-P does not offer discounts for users completing the course.

STC's new 6100 was also reviewed, and support training can be arranged on the unit for remote installations, but is not offered as standard course. The training received would be of such a high level, however, (equivalent to STC technician education) that STC would expect users to provide maintenance themselves and need STC only as a backup to their own staff. Likewise, guaranteed uptimes are not standardly offered, but are commonly negotiated by local offices as they can be provided.

CPX Distributing for CDC . . .

A recent question of the extent to which CPX offers support for CDC disk drives revealed that the TPM company acts as an authorized distributor for Control Data, offering a full line of supplies and assemblies necessary for the maintenance of CDC's removable media disks. All media, filters, alignment packs and head assemblies are provided, as well as specialized tools used in service, and all motors, spindles, circuit boards, and power supplies associated with CDC disk maintenance. Currently, CDC is the only manufacturer for which CPX is acting distributor, but the company does offer straight suport on a variety of other manufacturers' products.

Pyramid Technologies Support Profile . . .

PYRAMID Technologies, based in Mountain View, CA, is a relatively small but growing contender in the parallel processing market. Revenues topped \$33 million in fiscal 1985 for the firm, whose basic products are a series of 32-bit superminis featuring RISC-based virtual memory capabilities. Net income of \$2.9 million was realized over the year from the sale of their units, each ranging from \$260,000 to \$500,000 in price.



The company operates 17 sales/service locations across the U.S., with support centralized in the Mountain View headquarters, where technical support, remote diagnostics, and call handling is based. PYRAMID employs 66 total support staff with between 24 and 27 actual engineers at work in the field. Support offerings range from basic traditional on-site service for both hardware and software, through "customer-built" agreements accommodating user self-maintenance to any extent desired

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DECEMBER 1986

Bell South Acquires Dataserv . . .

DATASERV Computer Maintenance, Inc., one of the top contenders in the TPM marketplace, was purchased by BELL SOUTH late in November for an undisclosed amount. DATASERV, specializing in service and support of IBM and compatible systems and peripherals, reported \$23 million in revenue last year, with expected revenue of \$37 million in 1986. BELL SOUTH picks up 32 service locations and a staff of over 400 field engineers with the acquisition. Further details of the purchase and its effect on operations are forthcoming.

Honeywell Sells Off Computer Operations . . .

HONEYWELL, in a move defining its exit from the remainder of the "bunch" (previously BURROUGHS, UNIVAC, NCR, CDC, HONEYWELL) group of U.S.-based mainframe manufacturers, has restructured operations into an international partnership with Compagnie des Machines Bull of France and NEC Corporation of Japan. In a \$5 million agreement, HONEYWELL passed 57.5% of its information systems operation to the new company which will emerge from the pact, and has further plans to reduce its IS holdings in the joint operation over the next few years. NEC will hold a 15% share of the new organization, with Honeywell and Bull equally sharing the remaining 85%. Honeywell retains an option to reduce its interest in the company to 19.9% over the next two years. Recent sluggish sales trends experienced by HONEYWELL IS qualifies the move away from the system manufacturing business as a financially sound one for HONEYWELL.



Northern Telecom Loses Western Offices to PACTEL . . .

As was mentioned in the November Service Update, PACTEL InfoSystems had recently centralized its support operations into a single facility in Northern California. Strengthening its resource base on the West Coast, the reorganization effort was soon followed by the announcement of PACTEL's acquisition of the western sales and service branches of NORTHERN TELECOM, Inc. All of the 700 NORTHERN TELECOM offices located in California, Oregon, Washington, Colorado, and Arizona are now operating under the PACTEL logo, offering continued support to NORTHERN TELECOM customers, as well as taking on the needs of PACTEL users in the western states.

DEC Postpones License Transfer Policy Change

As discussed in the previous issue of the newsletter, DEC had abruptly announced at its recent DECUS seminar a change in policy which prohibited software license transfer between DEC product users. Up against stiff opposition from users, DEC quickly followed the announcement (originally not planned to be revealed to customers until early in 1987) with a postponement and clarification statement. The new policy, which provides for transfers within a corporate entity, will now go into effect in March 1987. Other clarifications included the allowance of transfer between OEMs and sublicensees, and the provision that, although operating systems must be relicensed when transferring hardware ownership between users, only the difference between an older software package and an upgrade to the package need be paid when dealing with layered software products. DEC previously had allowed for transfer of license with no assessment charges involved for approved cases of transfer. Basically, most situations were granted right to transfer if not a clear case of brokering.

Contract Termination and User Refunds . . .

TPM users opting to prepay yearly maintenance contracts, although least likely to find cancellation of the agreement necessary, face a wide variety of vendor attitudes across the marketplace. Three of the top third-party firms provide examples of the range of policies applicable to the situation.

HONEYWELL's policy exemplifies the harshest of attitudes toward annual contract cancellation, allowing no refunds of any fees paid in over the term, even if the entire annual fee has been collected.



UNISYS, although agreeing that contractually the entire yearly fee could be withheld, takes a less severe stand concerning the issue of refunds. Should a UNISYS customer desire to retract within the term, the situation, considering the user's reason for withdrawal from the agreement, would be reviewed and final terms and refunds deemed appropriate would be awarded.

McDONNELL DOUGLAS field service, by policy, will repay fees collected beyond the length of notice required for cancellation of the contract. Notice required for cancellation varies with the type of contract entered into, but has a minimum of 60 days.

Epic Data Support Plans . . .

EPIC DATA INC., the \$16 million manufacturer of system peripherals, controllers, and media, bases its manufacturing and repair operations in Richmond, British Columbia, and provides users of its IBM/DEC/DG/HP/NCR compatible units with three basic options for manufacturer-supplied repair. Although many of the units are supported by third-party companies as part of a larger system, service through mail-in depot can be contracted with EPIC at a standard cost of 8% of the unit's purchase price. A second option is standard per incident depot arrangement, with flat labor fees ranging from \$125 to \$450 (depending upon machine type) plus replacement parts costs. The third plan, although still mainly depot based, offers users turnaround comparable to on-site support. Priced at 12% of purchase price, the agreement provides users with a stock of spare units onsite, allowing for immediate replacement of a failed unit. This defective unit can then be sent back to EPIC for repair without imposing the usual downtime resulting from traditional depot support arrangements--an interesting strategy allowing a manufacturer with limited support resources to compete with on-site support offered by national TPMs.

In Support of Retired Products . . .

The issue of product retirement is not often considered by users as they weigh alternatives in the purchase of their new system. Once a unit is removed from a vendor's production line, however, the availability of spares and support for that aged system becomes of obvious concern to its users. Customers of systems being retired from the market are usually notified of the vendor's policy of continued support allowing sufficient lead time for that user to consider the available alternatives. Approaches to the situation vary greatly between manufacturers, however...



DG gives written notice of the stoppage of active service on its units, providing customers with a 36-month period in which to choose between the third-party and vendor-provided T&M coverage available. Trade-in allowances provide users with a certain incentive to replace their old system with a newer, upgraded unit from DG.

GOULD's standard policy provides for written notice 90 days prior to the date of a product's retirement, and allows for service on the unit to be continued for five years after the last standard unit comes off the assembly line. This term can be extended up to 15 full years beyond the date of retirement for systems which have been under an uninterrupted contract for the life of the product. Product discontinuance is also published in GOULD depot repair price listings which are released two times yearly.

H-P holds no clear-cut corporatewide policy regarding notice of retirement and specific product policy varies by system. The number of installed units in the field, as well as internal resource factors are considered in the setting of extended-support terms, and responsibility for notifying users of the impending retirement is relegated to sales representatives who can discuss alternatives and trade-up deals with the customer.

PRIME gives users a 12-month term of notice upon the retirement of its systems and will continue to offer support for the product for a full seven years beyond its official removal from the active-product list. Extensive trade-in allowance programs are provided as user incentive for upgrade to a newer PRIME machine.

DEC, in answer to our service/retirement question, cited an example of one of its oldest units on the market, a PDP/7 installed in the early 1960s which 20 years later is still being provided with DEC support.



Texas Instruments' "TI-Care Plus" Offering . . .

A little over one year ago, TEXAS INSTRUMENTS announced the enhanced premium support program "TI-Care Plus" as the successor to its TI-Care offering, which had provided users with the option of four-hour response time for a 30% uplift from a system's basic monthly maintenance charge. TI-Care Plus offers the same four-hour response during normal business hours plus an uptime guarantee for a lower, 20% uplift to a unit's BMMC. The uptime guarantee, promoted as a promise for 96% uptime for the system core unit, is actually based on intervals of three months, guaranteeing 96% uptime over each 2,190-hour period, or the 20% uplift amount will be refunded to the user. Thus, in effect, the guarantee provides for an annual uptime pledge of only 84% in total, considering the three-month period on which the agreement is based. Any guarantee of uptime is better than none at all, however, and the reduction in premium for 4-hour response was welcomed by TI's Business-Pro and Business Systems Series users who qualify for the program. Users of critical systems can opt for a "99%" guarantee with 4-hour response, 24 hours/7 days per week at a 72% premium over BMMC. Similar TI-Care service previously cost a 130% premium with no uptime guarantee associated with the support. The TI-Care Plus agreement is provided in basically all major metropolitan areas of the continental U.S., and can be purchased to cover all of TI's Business Pro systems, as well as the Business Systems Series 100, 300, and 600.

DEC Discounting Spares to VARs . . .

DEC, providing the most lenient discounts to resellers in the market, provides its VARs with discounts on spare parts which equal the discounts allowed them on the actual product purchased from DEC. The considerable price breaks are provided to all DEC VARS, with one exception--the reselling firm cannot also be involved in the business of third-party maintenance.

Response Times Delivered by Telecom Vendors . . .

A recent survey of top telecom and communications systems manufacturers regarding their quoted response time for both contract and "time and materials" customers revealed the following...



Like most vendors, contract customers at WANG hold priority among incoming calls for help in the field; T&M customers receive response on a best-effort basis. The lowest response time provided to WANG users is the two-hour guarantee provided to Uptime 300 and Wangcare Plus contract customers who lie within a 25-mile radius of a Wang service center. T&M support is billed at \$116 per hour prime hours (Monday through Friday, 8:00 a.m. to 5:00 p.m.) and at \$150 during other times. Per-call users must pay a minimum of a two-hour call if within 50 miles of a service center, plus travel charges equivalent to an additional one-half hour from 0 to 10 miles, 1 hour for 11 to 25 miles, and 2 hours for a 26- to 50-mile trip (one way). If from 51 to 100 miles, a minimum of 4 hours is charged, plus either 3 hours (51 to 75 miles), or 4 hours (76 and further) for travel time.

DEC contract customers, as defined by their contract term, receive priority among service calls, and can count on four-hour response if a DECservice customer, or two-hour response on new, larger VAX systems as announced earlier this year. Non-contract customers' response is quoted as best effort on DEC's part. Labor rates (parts and travel are additionally charged) run from \$81 (PCs, terminals) to \$115 for systems from 8:00 a.m. to 5:00 p.m., Monday through Friday, and \$96 to \$137 during non-prime hours. A minimum charge per call is set at two hours, and the time is billed portal to portal.

ROLM, by policy, will give contract users priority, but in practice considers the immediacy and seriousness of each caller's need. Normal response quoted for contract customers is three hours for major problems. Accelerated responses of 1.5 hours are available. Minor problem calls for contract as well as T&M users are responded to within 24 hours. T&M customers also have a rapid response time option available, providing three-hour response for a flat \$250 adder. Time and materials rates (8:00 a.m. to 5:00 p.m., Monday through Friday) are billed with a one-hour minimum at \$95 for the first hour of service and at \$65 for each subsequent hour spent on the job. Overtime is charged at \$130 the first hour and \$100 even beyond this time. Travel charges are "built into" these hourly fees.

INTECOM commented that conflicts for FE resources are rare within its service operation, but, again, contract customers would likely be given priority when the degree of the competing problems were equal. Priority, as well as response time, are based on this issue of criticality for T&M customers as well as contracted users. Per-call rates at INTECOM are based on a \$50 per hour prime rate, billed portal to portal, and carry a minimum charge of one-half hour.



DEC Disaster Recovery Program . . .

DEC has developed a comprehensive disaster recovery program to protect companies' computing resources. The DEC recovery system helps protect data and enlists quick recovery if a disaster should occur. The recovery system allows DEC to provide single-source dependability and at the same time allows the customer to make one call to receive the needed service enabling its system to become operational. DEC combines several services to make up its disaster recovery program. These services include Information Management, Consulting/Education, Data Protection, Recover-ALL, RESTART, ReServe, and DECsite. A deeper look into DEC's recovery services will give a clearer understanding of the components that make up the recovery program.

- INFORMATION MANAGEMENT, CONSULTING/EDUCATION features customized consulting for contingency planning in case of disaster. In addition, educational services are offered in the form of seminars teaching protection of data resources. Issues covered in the seminars include creating your own contingency plan, assessing data center vulnerabilities, sources of emergency computing, designing and maintaining a recovery plan, and training of selected recovery teams, in addition to other relevant issues.
- DATA PROTECTION encompasses data protection as well as media maintenance. Media maintenance includes secured media storage facilities, custom equipment and trained personnel, automated process and control, management/inventory/status reports, and 7-days-a-week/24-hour data retrieval. DEC's Data Protection service ultimately prevents business slowdown when data or media have been damaged.
- RECOVER-ALL works along with a customer's DEC field service agreement, covering situations not otherwise included by the agreement. Situations covered by Recover-All may include power failure, sprinkler leakage, fire, theft, and vandalism. Recover-All fixes or replaces damaged equipment quickly to get a customer's system up and running and minimize downtime. In addition, Recover-All offers reimbursement for extraordinary expenses such as use of DEC's ReServe shell site while equipment is being repaired.



- RESTART is used for backup of critical data processing applications. This service allows backup of DP applications within hours of a disaster. RESTART is targeted at organizations who are subject to backup regulations, such as financial institutions and government agencies, or companies who are dependent on the processing and availability of data. This service allows the customer to go to a secure DEC facility and utilize the necessary equipment, personnel, and facility to resume critical processing functions. RESTART I provides coverage during weekends and evenings and RESTART II provides coverage 24 hours per day, 7 days a week.
- RESERVE provides a computer-ready controlled environment for a customer's computer system. This service uses DEC technology to provide a safe location for continuance of computer operations. Entrance into the facility is controlled to ensure the security of a customer's operations. ReServe includes 1,000 square feet of computer-ready space, phone wiring, and transportation of a customer's system to the site. An interesting side note, the cost of using ReServe can be covered under DEC's Recover-All service.
- DECSITE is used to plan, design, and build computer sites. The advantage of DECSite is the ability to complete the construction in the quickest way. DECSite offers three levels of service: DECSite I is the decision stage and is used to analyze computer environment needs to formulate budget and schedule estimates; DECSite II is the design stage and provides the customer with drawings and specs of the plan that was chosen in DECSite I; DECSite II is the delivery state. At the end of DECSite II, DEC will submit a price quote and delivery schedule for approval. The customer will review the quote and when the agreement is made, DEC will provide the necessary components to construct the computer facility.

In addition to these disaster recovery services, DEC offers a Contingency Planning Assistance service. This service offers detailed management guidelines and an automated model disaster recovery plan. The planning guidelines include selling management, data center audits, risk analysis, testing, off-site storage requirements, personnel, and training. The disaster recovery plan, Disaster Plan/80, includes a four-hour orientation and guidelines/models to help develop a contingency plan for the organization in case of disaster. Disaster plan emergency procedures are available on media allowing for customization of the software. The Contingency Planning Assistance service can be utilized by any small, medium, or large organization.

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